A never ending story: interaction patterns and economic development

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A Never Ending Story – Interaction Patterns and Economic Development

by

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Abstract

Industrial marketing and purchasing is an interesting phenomenon. On the surface it appears as very mundane, a simple day-to-day activity performed by purchasers, sales personnel, and technical specialists; i.e. most often by professions representing 'middle management'. As such, it is not surrounded with any of the greater prestige ascribed to more hyped business activities, such as financing and strategy. Furthermore, industrial marketing and purchasing is seldom recognised as being of any greater importance for society at large. In policy circles, for example the UN, OECD and EU, where they stress the importance of innovation, productivity and growth, industrial marketing and purchasing is rarely mentioned as a related phenomenon .

Behind the scenes, however, an empirical, much more challenging view is outlined. When the content and the effects of industrial marketing and purchasing processes are scrutinised empirically, these activities appear as perhaps the most important source for business development, industrial renewal, efficiency and innovation. From this perspective, industrial marketing and purchasing seems to be a critical phenomenon for creating prosperity for both companies and communities and for general economic growth. It is this role of industrial marketing and purchasing that we highlight and discuss in this article. Based on extensive empirical research results, we argue that interaction is the main ingredient in these processes. This implies that the supplier-customer interaction has a central development function for efficiency and innovativeness, for companies as well as for the economy at large. Thus, there is a strong need to include and consider this key engine for dynamics (and its role in developing materialised structures as well as ideas) in any theoretical study of economic development.

Keywords: Interaction, innovation, business renewal, development, networks, relationships, efficiency, growth, dynamics

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1. Interaction patterns formed by day-to-day interactions

The economic world is full of day-to-day interactions where millions of deliveries of goods and services are supplied and used – the result of industrial marketing and purchasing activities. This means that a number of processes are on-going, where goods and services are related to established material and immaterial investments in companies and organisations, in ways that stretch from standardised activities to completely new trial-and-error-like development endeavours. It also means that people representing a number of different professions, engaged in small and large companies, governmental and non-governmental organisations, are involved in millions of problem-solving discussions related to performed – or not yet performed – business solutions, in meetings, by phone, by email or over the Internet.

There are a wide variety of industrial marketing and purchasing interactions. Sometimes they involve a few people representing a narrow supplier-user interface, where what is going to be delivered and how it is going to be used is easily solved; many of these types of processes are highly standardised and routinised. Other interactions are more complex and require intense problem-solving, including involvement of a set of managers and specialists related to both sides of the supplier-customer interfaces. The interactions can also concern future deliveries and use of goods and services when, for different reasons, established solutions no longer work. In these situations, neither what is going to be delivered nor how any alternative solutions can be used, can be clearly outlined in advance. Together, all of these interactions concerning the creation, utilisation and adaptation of objects and ideas, constitute industrial marketing and purchasing. The outcome results in the development, supply and use of specific products, processes and services. It results in efficiency and innovations and can be measured in terms of profit numbers on a company level, as well as in terms of trade, growth and GNP figures on a national level. Thus, it has definite consequences for single companies and for nations as well as for international development (Håkansson, Ford, Gadde, Snehota & Waluszewski 2009).

So, industrial marketing and purchasing are not only key mechanisms for efficiency and innovativeness, but how the supplier-customer interfaces are organised has consequences for what activities are carried out within what company, located where in space. Thus, how

supplier-customer interfaces are organised is not only of great importance for the direct and indirect involved counterparts, but also for society at large. The space dynamic is important to society for at least two reasons. If the dynamics are expressed in terms of development of new products, processes and/or services, followed by increased investments and employment, this is certainly beneficial for the communities involved in these processes. If the dynamics are expressed in terms of outsourcing *outside* earlier community borders, the outcome will be beneficial for *some* communities and detrimental for others, both within or outside national borders. Thus, the winners in these processes are those who have an increased responsibility for certain functions of an end-product, and consequently the communities where they are localised (Waluszewski 2011).

The supplier-customer interface dynamics that have occurred over recent decades have also had severe consequences for both specific companies and for communities. Specialised suppliers and sub-suppliers have gained increased responsibility for numbers of producing, logistics and service activities that previously were undertaken within firms, resulting in the re-creation of numerous supplier-customer interfaces across spatial borders. This means that the contemporary company typically buys the main part of its turnover, and it is not rare that more than 70, 80 or even 90% of the total product costs stem from external suppliers. As 100% of the sales go to customers, interaction with counterparts on the supplier and user sides is the main activity of the contemporary company. Hence, if supplier-customer interaction has always been at the heart of business – a determinant for both efficiency and renewal – the increased specialisation accompanied by globally connected supplier-customer interfaces has given interaction an increased importance in terms of its expanded role and function. A challenging observation is that, along with the fact that an increasingly larger share of the solutions embedded into a certain end-product are a result of interaction, each company's hierarchical influence over the related resources and activities has dramatically decreased.

In other words, supplier-customer interaction appears as the door to thousands of problems – *and* thousands of opportunities. It is a door to confrontation of resources, to relating of activities and to meetings among economic actors – and a door to the increased or decreased importance of some companies in relation to others. Interaction is the room where stability is created *and* where changes appear and important development paths are outlined. Thus, both from a business and societal point of view there are severe reasons to investigate interaction patterns; what does the variation look like and what are the consequences. The variation is definitely impressive, stretching from simple and routinised affairs to complex processes

where a whole set of issues and economic actors are involved. This variation seems to be partly due to the ambitions of the involved companies and organisations and partly due to other context-related factors. Thus, both the direct supplier-customer interface and its context appear as a source for both enhancing and restricting different types of interactions.

1.1 Research question

This article is a modest attempt to investigate the *variation* in the content of supplier-customer interaction patterns and the economic outcome as well as the most significant influencing factors. The study can be formulated in a simple research model presented in Figure 1.

Figure 1 in here

As indicated by Figure 1, the research question has to be approached in a three-step analysis. First, with the help of both theories and empirical observations, we will characterise the variation of the content of supplier-customer interactions by focusing on how the interaction affects the activated resources on both sides. That is, we will identify how four main types of resources are affected by different interactions, something that allows us to outline a set of interaction types. Second, with the different interaction types as a base, we will identify the most important factors behind the variation in the interaction; i.e. we will identify the forces that create variation in the interaction. Finally, in the third step, we will consider the outcomes of the different interaction types; i.e. based on the variation in interaction types we will outline their different potential economic effects.

1.3 Theoretical point of departure

The theoretical point of departure of this paper dates back to the late 1960s and early 1970s (Johanson & Mattson 1994), when empirical observations suggested that marketing and purchasing interaction creates imprints on what's exchanged as well as on the participating actors. This observation initiated a still ongoing development of an interaction based industrial marketing and purchasing theory, today known as the 'IMP network' approach, with the aim to catch the content and effect of business interaction, in terms of both technological and organisational aspects (Håkansson ed, 1982; Håkansson 1989; Håkansson, Ford, Gadde, Snehota & Waluszewski 2009).

One of the basic assumptions in the IMP network approach is that interaction affects performed activities as well as the use and value of used resources (Penrose 1959; Alderson

1957; Hägg & Johanson eds. 1982; Håkansson & Snehota 1989; Håkansson & Waluszewski 2002). Consequently, the IMP analytical tools have the dyad as the smallest unit of analysis. The Interaction Approach (Håkansson ed, 1982) allows a focus on the interaction between two parties; its short and long term effect on organisational and technological resources of the interacting parties as well how they relate to a larger environment. The ARA model (Håkansson & Snehota 1995) allows investigations of the content and effects of business relationships in three different layers; resource ties, activity links and actor bonds. The 4R model (Håkansson & Waluszewski 2002) allows investigations of resource interaction, whether or not they are represented by direct business relationships. A common assumption embedded into these models is that the interaction is not just a simple mechanism (as assumed in the market model) but has a specific *substance*. The substance of interaction has both cost and revenue consequences, but more importantly it affects the involved companies, their activities and resources.

1.4 Research design

The identification of interaction types starts out from one of the IMP models, the so-called 4R model (Håkansson & Waluszewski 2002), which is utilised to distinguish how four main types of resources are affected by industrial marketing and purchasing interaction. Two are mainly physical – products and production facilities, and two are mainly social – business units and business relationships. To investigate how different types of interactions – regardless of how common they are in the empirical and the model world – affect these four types of resources, a classification made in Cantillon & Håkansson (2009) and Håkansson & Prenkert (2004) is utilised. The interaction types stretch from the 'pure exchange', which is rather rare in the empirical world but dominant in the model world, to 'networking', which is rather common in the empirical world but less recognised in the model world. The *empirical* observations of how interactions affect resources are based on research projects that the authors have been responsible for and/or have been involved in, and all these projects, as the references illustrate, have been published in peer reviewed, international journals and books. However, behind these publications there are also a number of extensive, empirical-based PhD studies, where the empirical observations that have been utilised are presented in more detail. Several of the reviewed and published PhD studies are presented in appendix 1.

2. The difference among interactions

Some industrial marketing and purchasing interactions are routinised and carried out over the Internet, and neither the people nor the products involved are deeply affected in any way, at least not in the short run. Other marketing and purchasing interactions concern products that are not yet fully developed, production facilities that are not yet materialised and can even include situations where neither the supplier nor the customer are fully established as companies. Yet others concern interactions among private companies and publicly financed organisations, and have to be carried out in accordance with specific national, as well as transnational, public purchasing regulations. Thus, one important feature of the economy's total supplier-customer interaction pattern is that there is a large variation in type of interaction, and that the variation appears in several dimensions.

Certainly there are single supplier-customer interactions that are very simple and are not deeply related to other interactions. However, these interactions are seldom the most economically significant ones. In general, the industrial marketing and purchasing interactions are complex and more or less related to other contemporary and historical interactions, connecting closely or more distantly related companies and communities, products and production units, to each other. This means that there are both interdependencies among each episode of specific interactions, and across different interactions. Together, supplier-customer interactions create specific and partly integrated patterns (Håkansson, Ford, Gadde, Snehota & Waluszewski 2009).

To give a first picture of the variety of industrial marketing and purchasing interactions we will, use a classification of interaction types presented in Cantillon & Håkansson (2009) and Håkansson & Prenkert (2004), based on a resource model presented in Håkansson & Waluszewski (2002). The categories are empirical based, but can also be related to specific theoretical models; thus there are different logics that can explain their appearance. Each category's relationship to a specific model also indicates that each type can be expected to have some specific effects. In Table 1 there is an overview of the six types of distinguished supplier-user interaction types grouped in relation to the resources that are affected. Together the six groups form a Guttman scale. This means that if we go from the top to the bottom more resources are affected and the effects successively become more long-term. At the top we have interaction giving no direct (but some indirect) effects on the resources while at the bottom there are large direct and indirect effects on several types of resources and the effects are more long-term. In this way each category builds on the previous ones.

Table 1 in here

In the next sections we present a closer look at each of the interaction types and important links to different theories will be identified. First is the one dominating in market theory.

Pure exchange

If pure exchange, where the industrial marketing and purchasing process *does not* affect any of the resources involved directly – products, production facilities, business units or business relationships – is a rare exception in the empirical world, it is the normality in classic market theory. This is how the exchange of products or services for money is conceptualised in standard economics textbooks. In this stylised model the exchange has no direct effects on either the people, the organisations, the products, or the production facilities involved, but is just working as a mechanism, or as 'thin interaction' as Swedberg (1994) describes it. As there is no friction among resources, customers and suppliers can switch without any effect on either the supplier or customer side. Thus, customers can and will buy from the supplier with the lowest price. This in turn will, according to the theory, drive all inefficient actors out of the market. Thus it is a strong indirect effect of exchange that drives efficiency.

Deviations from these so-called full market conditions, in terms of limitations in the numbers of buyers and sellers, have been thoroughly analysed with the use of such concepts as oligopoly and monopoly. However, the characteristic of the interaction pattern is the same – the customers react to the suppliers' prices and neither human or material resources are affected by the interaction. The only difference, compared to pure exchange, is that the customers have no or only a few alternative suppliers to switch to if the prices are too high. However, although this category, which is the reference point in all market analysis, is more common in models than in the empirical world, it is important to consider it, since it clearly demonstrates that we always have to include the indirect effects of interaction.

2.1 Exchange with some social elements

Interaction that affects only the parties involved and their specific relationships, but not the products and production facilities involved, is an empirical phenomenon that over time might characterise the exchange of rather standardised solutions. Furthermore, this type of interaction can also constitute the first steps in the development of a more extensive supplier-customer interaction. That all human interaction has social consequences is also a recognised phenomenon in sociology (Homans 1961; Blau 1964; Granovetter 1985). Social exchange

theory is based on the assumption that when people interact and start to get to know each other, their sentiments are affected. Thus, due to this theoretical reasoning, as soon as industrial marketing and purchasing include personal contacts, a certain social embedding will take place. This knowledge has certainly been taken advantage of, from both sides of the interface, in industrial (and other) marketing and purchasing, as a way to mobilise support for, and thereby affect, the choice of solution.

This type of interaction has definitely both light and dark sides. The light side is that when a supplier-customer interface has a social base, where the interacting parts have a shared understanding of both the restrictions and opportunities on both sides of the interfaces, it can be utilised as a starting point for the interaction types described below, where the exchanged resources are also developed. The dark side of this type of exchange is when the social base is only utilised to create benefits for the people or for the business actors involved in the supplier-customer interface. When the social bonds are utilised to give the involved people or actors increased power, personal economic benefits or decreased work load (phenomena that are well recognised in the market literature) but where no benefits in terms of improvements in products or production facilities are created, they are definitely not positive for efficiency or productivity (Hasselberg & Petterson 2006).

There are some specific indirect effects of this type of interaction and the most important can be seen in terms of social networks. Here individuals are bound together in networks that can have important effects on both behaviour and influence (Freeman 1982; Uzzi 1997).

2.2 Buying and selling

The third category concerns industrial marketing and purchasing situations where the product is not given, but due to supplier-customer interaction can be adapted or developed in different ways. The product becomes, to a larger or lesser extent, a result of the supplier-customer interaction. This type of interaction has at least two ingredients: one problem-solving regarding the design of the offer and one negotiating process concerning the economic compensation. This interaction includes the possibility of developing the offer, but it also means that the buying-selling process is no longer a friction free, cost free reaction on prices. The phenomenon of buying-selling processes, which includes adaptations of the offer as well as costs for carrying out these processes, have been observed and analysed in economic

literature by transaction costs scholars (Williamsson (1975, 1979, 1985); Williamsson & Masten eds (1999); Heide (1994)).

Thus, when industrial marketing and purchasing concerns a product that is not completely specified, the interaction acquires a substance that is related to the features of the product. In general the adaptation can be described as technical, but this has to be interpreted in a broad sense. The content of the interaction affects the existing 'stock' and leaves specific traces on the product. These can be created in successive incremental steps where some specific features of the product are developed, or in terms of introduction of novel solutions resulting in more radical innovations.

This type of buying-selling interaction constitutes a room where different potential possibilities are outlined. It is through interaction that the buyers and sellers gain a deeper understanding of opportunities related to possible product solutions and needs. The interaction results in an increased awareness among the involved actors about opportunities related to the technical dimensions, and they gain an important problem-solving ingredient. The more industrial marketing and purchasing includes this type of interaction, the more likely that technological development leading to innovation will occur.

Here the indirect effects become substantive relating different technical development processes to each other. Through the interaction the development and the features of the product technologies are embedded into the involved companies.

2.3 Producing and using

The next type of industrial marketing and purchasing situations include interaction that affects the producing and using resources, along with including some change in the product. The main difference between this category and the earlier one is that changes in the producing and using resources often means changes in larger systems and investments; something that takes place over a longer period of time. Thus, it takes a longer time to change these types of resources, and once they are changed it also takes a long time to change back. This type of change has been analysed and discussed in economic terms by Richardson (1972) and also by researchers using the resource-based approach (e.g. Barney 2002). The key aspect brought forward in theory is that this type of interaction results in a successive adaptation between the involved actors in a very basic way. The opportunity to form relationships between actors

offers opportunities to develop more specialised production structures as suggested by Richardsson (1972) and Dubois (1998).

Here the interaction does not just leave traces, but it more or less determines the design and development of the basic technological and economic structure. Used facilities are developed in a co-evolutional way and also determine what solutions will be efficient both in a dyadic and a network view. However, this type of interaction does not require that the actors have very close relationships; it is enough that they are aware of the importance of relating their investments to what the others are doing. One interesting consequence is that the more resources are created through this type of interaction, the more barriers are also created for other alternative resource structures to emerge.

2.4 Cooperation

Cooperation, which is the label for the fifth category, is an extension of both the third and fourth categories. The adaptations of products and/or facilities can be even more elaborated if they are done within cooperative relationships. If two counterparts do not just observe each other through interaction but develop the interaction into a cooperative relationship, together they can create an important team effect. This can increase the importance of the involved counterparts' solutions, but this solution might also be of importance for direct and indirect related counterparts, since there are two actors developing in a joint manner.

This type of interaction has been described and analysed in the strategic alliance literature (Hamel 1991; Doz 1996) as well as in relationship marketing (Hunt & Morgan 1995; Gummesson 2008). In both of these cases the focus has been on the direct effects on the involved companies. In the industrial network approach (Håkansson, Ford, Gadde, Snehota & Waluszewski 2009) the indirect effects on third parties are also included. Compared to the earlier interactions this type of interaction also affects how the parties are related to each other. Due to adaptations of products and producing and using resources, some parties get much closer than others. Over time, this type of interaction creates a specific structure among the involved companies – networks of businesses.

2.5 Networking

Finally, in the last category we have those interaction processes where the ambitions and the activities are aimed at creating networking effects, i.e. to influence the counterparts in a systematic way to change not only themselves, but also their relationships. Thus, the ambition

is to influence others' counterparts through the interaction. For example, the development of a specific supplier-customer relationship can be utilised as a means of becoming more attractive for a number of other relationships. These types of industrial marketing and purchasing situations have been described and analysed in case studies of business relationships or business networks (Håkansson & Waluszewski 2002; Strömsten & Håkansson 2007; Bengtsson & Håkansson, 2007; Baraldi & Waluszewski, 2007; Ingemansson & Waluszewski 2009; Waluszewski, Baraldi, Linne, Å. & Shih 2009; Hoholm & Olsen 2011).

When considering this last category it is important to note that there are also indirect network effects in the earlier types of interactions as described above. All interaction has indirect effects, as shown in the first category 'pure exchange'. The 'thicker' the interaction and, consequently, the 'thicker' the relationship, the larger the potential network effects will be. How large they will be depends on the degree to which the interaction in the focal relationship is observed and reacted to in other interactions/relationships. However, there is one main difference among these network effects and the last 'networking' category. In the first five types of interactions the network effects are indirect. Thus, there is no intention that the interactions and relationships that caused the network effects will also benefit from it. But in the 'networking' type of interaction, the aim of the actors is to create network forces that support the interacting parties behind it. Thus, the aim behind the 'networking' type of interaction is to create increased forces towards others. The 'networking' is utilised to create network effects that support certain interactions and/or certain relationships in a direct way.

It goes without saying that this interaction type has both light and dark sides for companies and for communities. In order to support innovation and productivity, 'networking' is not only wanted by companies, but is also advocated for by politicians and policy. However, 'networking' is neither neutral nor fair. Network forces that support the emergence of a particular business development will be beneficial for some 'investments in place' (Utterback & Abernathy 1975), but detrimental to others. Certainly those related to a path supported by network forces appreciate them more than those threatened by them.

3. Factors affecting the interaction

A construction industry where marketing and purchasing largely concern highly standardised products, and a biotech industry where marketing and purchasing concern products that

perhaps do not yet exist, show very different interaction patterns. The marketing and purchasing interaction pattern dominant in the construction industry is close to the 'interaction with some social elements' or 'buying and selling' type (Håkansson & Ingemansson 2011). The interaction pattern dominating the biotech industry, on the other hand, is closer to 'co-operation' and 'networking' (Waluszewski, Baraldi, Linne & Shih 2009). The type of dominant interaction pattern varies, both among and within different industrial areas; some are dominated by heavier interactions while others are characterised by more restricted types of interactions. Thus, there is an interesting variation among types of industries, but also between social and political contexts. Since both the content and effect of the six identified types of interaction are so different – where the first two have only indirect effects on the products exchanged and the latter have direct effects on the products exchanged, the utilised production facilities and the organisational units involved – it is relevant to ask questions such as: What forces are creating the existing patterns? Which are the critical factors behind different types of interaction patterns? What freedom does a single actor have to choose a certain type of interaction in relation to a specific counterpart? What can actors who want to support a certain type of interaction, for innovation or efficiency reasons, do to affect established interaction patterns?

From earlier research (for summaries see Håkansson, Ford, Gadde, Snehota & Waluszewski 2009; Wilkinson 2008) it is possible to identify at least three main factors behind the emergence of different marketing and purchasing interaction patterns (see Figure 2). The first and most important is the earlier history of interactions within the field. The total interaction pattern evolves over time and usually only changes slowly and in an incremental way. The importance of the earlier history is due to the fact that different types of supplier-customer interactions require different investments. The investments have to be made in the social dimensions as well as in the technological dimension – and they always have economic effects. For each step in the above identified interaction scale the total investment is successively larger. Thus, given a certain level of these investments the involved actors have

Figure 2 about here

very limited freedom to act in the short term. They are bound by earlier investments that can only be changed in a marginal and incremental way. It is both difficult and costly to make quick changes. For example, the recent crisis of the US automotive industry was detrimental

for a Scandinavian producer of advanced moulded components; all major production investments had been made in relation to global end-producers of trucks and tractors.

The second factor affecting the transaction pattern is the involved companies' ambitions in terms of interactions. How much are they prepared to invest in developing the marketing-purchasing interaction? Especially important is how the larger and more important actors try to develop their interactions. If these companies have strategies where relationships are of key importance, the intensity of the interaction will be larger, affecting both direct and indirect related counterparts and leading to a development of the interaction pattern within a certain field. For example, over the last decade large retailers have been very active in the development of their supply chains and networks, and more or less forced a number of direct and indirect suppliers to adapt to their requirements.

Finally, the third factor is probably the most fundamental – the basic technological, social and political context – since it has a great impact on how companies and organisations *can* relate to each other and how beneficial this is. Interactions are always embedded into a context with specific technological, social and political characteristics and are thereby also related to them. The technological part of the context can hinder or support the development of interaction patterns and affect the ability to increase the total amount of interactions and/or influence the content of interactions. For example, public investments in infrastructure and communication technologies are, on the whole, a prerequisite for the companies' abilities to develop transnational supplier and customer interactions. This underlines the fact that the technological part of a context is embedded into a political system. Besides having a great impact on what technological systems are available for companies to utilise, the political part of the context also has a significant influence on the emerging interaction patterns through its legal systems. Is the legal system supporting or restricting long term customer-supplier relationships? For example, the marketing and purchasing relationships that Chinese companies are developing with counterparts both within and over national borders are examples of a strong company interaction that was totally forbidden just some decades ago. This in turn shows that interactions are embedded into social systems that can support either horizontal or top-bottom interactions. The influencing factors are summarised in Figure 3. Let us now have a closer look at these three influencing factors.

Figure 3 in here

3.1 Earlier investments in the interaction pattern

A purchaser at the German Publisher Springer Verlag is interested in a new type of graphic paper quality. Through years of close interactions with the suppliers of graphic paper, the purchaser has the opportunity to – without going directly through the suppliers – discuss the possibility of achieving the desired solution with the suppliers' supplier of equipment and chemicals, as well with related research institutes and environmental organisations (Håkansson & Waluszewski 2002). What this small example reveals is that behind any marketing and purchasing process there is an existing interaction pattern that has been built up over time, and that the characteristics of this pattern influence the solution that can be achieved. From an outside perspective, such an interaction pattern can appear as very mundane. However, there are years of work behind the emergence of single as well as combinations of interactions and relationships. Through the combination of different types of interactions specific for a certain field, the involved companies are adapting and designing internal resources to fit together with the characteristics of the external interaction with counterparts. The adaptations are made in multiple ways. It is important to realise that adaptation also occurs when the interaction is of the simpler type. Still the internal resources have to be adapted to the features of the counterparts. In order to survive, companies have to fit with others on the supplying and using sides, both in terms of performed activities as well as used resources.

Each company involved in marketing and purchasing interactions has been forced to invest more or less in relation to its counterparts, and most often, also in a set of relationships, through adapting their resources. Both material and immaterial investments are made in relation to others over time, something that makes it difficult to quickly change the involved resources. An important consequence is that all companies have to make contemporary investments in material and immaterial resources in relation to the existing ones, i.e. in relation to the established interaction pattern. This lack of dramatic changes can also make the structure appear as somewhat unimportant. Hence, from the perspective of the total interaction pattern, all changes that companies undertake have to be incremental, even if, in certain situations, they might appear as rather dramatic for a single company. This means that every pattern, even if it is dominated by lesser developed interactions, will be difficult to change in the short term.

An interesting paradox is that the more types of resources that are involved in the interaction, the greater the possibilities for creating change. The more types of resources involved, the more types of interfaces that can be developed, and the more reasons for counterparts to engage in change compared to where the relationship investments are smaller. It might be much easier to accept and to take part in some change than to break the relationship. However, the more resources involved in the interaction, the greater the impact they will also have on the direction of the change.

The existing interaction pattern can be seen as a base or as a carpet with a certain pattern and whatever anyone wants to do they have to start in that specific pattern. The interaction pattern, despite the fact that it includes so many short term activities, is a heavy structure that none can escape. However, there is also a development direction in this heavy structure: it is never static or in balance but is always moving as the existing interactions include some new investments in the resources. There are investments in the internal resources as well as in the relationships. There are always some specific development paths. It means that the pattern gives both some obvious restrictions and some collective potential possibilities.

An illustrative example of how the collective, potential possibilities of interaction patterns can be utilised to create new crossroads is given in Shih's (2010) study of the emergence of a semiconductor industry based in Hsinchu in Taiwan. Over a few decades the Taiwanese business landscape was transformed from labour intensive manufacturing to the design and production of advanced semiconductors. The official interpretation is that this development was a result of a consequent policy goal of supporting the emergence of an advanced knowledge-based industry, with investments in R&D and technology transfer as the main means. However, behind this 'Silicon Valley-like' façade, Shih highlights the importance of established and gradually changing interaction patterns. A decade before the policy initiated investment in semiconductor R&D, companies such as General Instruments, Philips, RCA and Texas Instruments had invested in assembly semiconductor activities in Taiwan. However, from the beginning neither the companies that, for cost reasons, had moved their assembly to Taiwan, nor the policy-supported organisations engaged in semiconductor R&D, saw any development opportunities in combining these interaction patterns. The plan behind the Taiwanese semiconductor investments was to breed advanced high tech end-producers. However, an important cross-road occurred in the mid 1980s when the global producers, led by Philips, started to search for a possible outsourcing alternative for semiconductors. At that time Taiwan had about two decades of investments in semiconductor design including, among

others, learning and teaching interactions with RCA. The attempt had not resulted in any take-off for a large scale Taiwanese semiconductor-based industry, but gradually Philips and three other global producers became aware of the emerging potential of utilising the Taiwanese investments in the establishment of a semiconductor supplier. After negotiations with four global companies, Philips, together with the Taiwanese government, became the largest shareholder of the Taiwan Semiconductor Manufacturing Company (TSMC), and after a year of intense knowledge exchange, production began in the late 1980s. Two decades later TSMC and a number of Taiwanese suppliers engaged in design, equipment development, fabrication, testing, and packaging in relation to global customers, making the Taiwanese semiconductor industry into one of the four largest in the world (Shih 2010).

3.2 *Strategies of interacting companies*

A biotech equipment company does not succeed in the ambition to launch a new biotech tool as an allergy diagnostic device. In order for both the product and company to survive, the company has to invest in the development of relationships to what's identified as 'lead-users' in a completely different field, namely research tools for analysis of molecule interaction. Through interacting closely with a number of internationally recognised, skilled researchers in this field, the product can be adapted to this new application area. The product is also successfully re-launched, however in a costly way, through direct interaction with a narrow user group. The solution became to engage in the establishment of relationships among customers, and in the support to user networks where users can share experiences directly with each other (Harrison & Waluszewski 2008).

What the short example above illustrates is that in order to emerge from one type of interaction pattern to another there is need for some strategic consciousness. To move from, for example 'pure exchange' or 'buying-selling' over to 'networking', or to move from 'networking' over to 'buying-selling', means to invest in relation to others over years, which requires both an ambition and endurance. This implies that each interaction type, and the investments made in relation to each, is influenced by the strategies and ambitions of the single company. Thus, depending on strategy, the investments can be mainly concentrated on internal resources, or it can be more or less dominated by extensive investments in relationships. Each single company decides how it wants to react on an established marketing and purchasing interaction pattern; if it wants to develop a standardised way to relate to others,

or if it wants to develop a cooperating or networking interaction pattern. And each company decides if it wants to continue to invest in an established interaction pattern, or if, for example, it wants to disinvest certain established relationships in order to be able to develop in a new direction, investing in new interaction processes and relationships.

Thus, each company prioritises some relationships and, in this way, gives their investments a particular direction. One example of a company that consequently, over decades, has developed a cooperating and networking interaction pattern is IKEA. In itself IKEA is a producer and retailer of furniture and related products, with more than 330 retail outlets in 41 countries, 125,000 employees and sales over EUR 20 billion.[3] The 'IKEA network' includes more than 1,220 direct suppliers in 55 counties, and approximately 10,000 sub-suppliers, and numbers of companies that complement them with equipment, design, software, etc. A specific example of IKEA's interaction pattern is given in a study presented in Baraldi & Waluszewski, (2007) and focuses on one product, the Lack coffee table, which has become one of IKEA's largest products, with sales of about 2.5 million tables per year. When IKEA launched the table in the early 1980s, a decision was made that the retail price for the Lack table should never exceed EUR 9.9 or USD 9.9. This meant that the company forced itself into a constant search for innovativeness and efficiency, which at the same time forced IKEA to systematically work with these issues with the suppliers. On the surface, the Lack table that the customers see in the stores looks the same, and has the same price, as when it was first introduced. However, under the surface Lack has undergone a radical development process. The production equipment utilised was a production line for doors, which was a way to economise on facilities and that also gave the Lack table its special thick but light (favoured by IKEA for logistic reasons) table top characteristics. Over the decades that Lack has been in production, the insert material was constantly developed, to a solution where the table top is based on high density fibre board filled with a special type of 'honeycombed' paper and legs based on chipboard. The most expensive component in the veneered versions of Lack is the veneers, but here IKEA's producing plant in Poland, together with the Lacquer supplier Akzo-Nobel, introduced a technique that allowed the replacement of real veneers with printed veneer. More than 100 development projects for the Lack table have been carried out over the years, involving more than 20 suppliers from five countries, engaged in the development of insert material, equipment, lacquer, engineering, etc. If we consider that the mobilising effort

[3] http://www.ikea.com/ms/sv_SE/about_ikea/facts_and_figures/index.html

IKEA has put into the constant development of the Lack table, influencing 20 suppliers to take part in the search for innovative and efficient parts-solutions related to Lack, it is easy to understand that a similar interaction pattern around at least part of IKEA's other 1,200 suppliers, makes an imprint on the total interaction pattern of companies directly and indirectly related to IKEA.

Although IKEA is advanced in its way of working in relation to its suppliers, it is also an illustration of an ongoing change where 'others' than the end-producers take greater responsibility for both innovativeness and efficiency issues. That specialisation and outsourcing changes the prerequisites for marketing and purchasing interaction has also been recognised in the business literature. Textbooks on marketing draw attention to the phenomenon as relationship marketing (Hunt &Morgan 1995; Gummesson 2008) and textbooks on purchasing to supply chains (Cristopher 2005) and outsourcing. In the same way studies on technological development and innovation, the importance of a conscious use of specific counterparts, or open sources for innovations, are underlined (von Hippel 2005; Chesbrough 2003).

All these examples highlight that there has been a shift in how scholars understand the key features of the business landscape, from approaching business as an internal issue (how to design the company in relation to goals and internal resources) to an inter-organisational view (how to design the company in relation to important counterparts). However, even in contemporary literature about industrial marketing and purchasing the main focus is still on a company's internal strategies and activities in an interdependent business landscape. There is still a long way to go before the interplay among counterparts, the existence of relationships and networks are truly reflected in business studies as a discipline. Given the contemporary global economic challenges that companies are exposed to – regardless of where they are located – it is not a very bold guess that this type of economic analysis will become a much more significant part of future business studies

Perhaps the most important consequence of a changed focus in studies of industrial marketing and purchasing, from 'internal' to 'interplay', is the insight that conscious reactions are as important as planned actions. All decisions regarding investments have to be done in interplay with important counterparts and it is when the company first sees the reaction that it knows how it has been read by the counterpart. And it is when it first sees the reaction that it can

decide about its own reaction to the reaction. Some of the crucial investments are done in this way in close interaction with counterparts and have to be adapted to the actual interaction.

3.3 *Basic social, political and technological context*

For more than three decades printed forms for a public post office administration were the most important products for a medium sized printing house. However, during this period of time, the printing company had no opportunity to interact directly with the customers to discuss quality, price, delivery and other issues. Neither did it have the opportunity to discuss these issues in direct interactions with it suppliers. All quality, delivery and price issues, in relation to both the supplier and the customer side, instead had to go through the Soviet Union planning authorities, and all direct interaction among the printing company and its suppliers and customers was forbidden (Johanson & Waluszewski, 2007).

What this short illustration of marketing and purchasing during the Soviet era reminds us about is that all interactions among companies and organisations are parts of larger contexts, with specific social, political and technological characteristics that influence and are influenced by business interactions. The *social aspect of the context* is central for the emergence and content of the supplier-customer interaction (Blau 1964; Granovetter 1985). But, as the illustration above underlines, this is closely related to the *political aspect of the context* which, through legislation, policy and standards have a great impact on the emergence and content of business interaction – something that is also reflected in a number of studies that have been carried out in the IMP setting (Hadjikhani & Sharma 1995; Hadjikhani & Håkansson 1996; Håkansson & Waluszewski 1997; Raesfeld 1998; Harrison & Easton 2002; Håkansson & Waluszewski 2002; Johanson & Johanson 2006; Huemer & Cox 2007; Cantillon & Håkansson 2009; Waluszewski, Baraldi, Linne, & Shih 2009; Shih 2010). What these studies underline is that the social and political aspects of the context, as the empirical studies of innovation in biotech based pharmaceutical industries in the US, China and Taiwan reported in Waluszewski, Baraldi, Linne, & Shih (2009) highlight, can be a strong supporting force for the emergence of ‘thick’ supplier-customer interaction. Or, as Johanson’s study of marketing and purchasing in the former Soviet Union reveals, (Johanson & Johanson 2006; Johanson & Waluszewski 2007), can be a strong hindrance to such emergence. The latter study also highlights the embeddedness of these two aspects. Before the Russian transition, supplier-customer interaction through legal arrangements, was forced to be an indirect affair,

only allowed to take place through governmental planning authorities. And, after the transition when this legislation was abandoned and decentralised decision making was allowed, i.e. when companies could decide by themselves from whom to buy and sell, imprints of the former political arrangements were visible in the social interaction. Representatives for companies and organisations were simply not experienced in vertical across company interaction, and consequently lacked awareness of what opportunities, in terms of efficiency and innovativeness, could be realised through 'thick' interaction. Hence, what this study underlines is that the social and political aspects of a context are the interaction pattern and the emergence of specific resource interfaces and resource features; it is in this way embedded into the resources and into how technological solutions emerge.

That social and political aspects of the context, in terms of familiarity with and legal support for decentralised decision-making, can support vertical across company interaction and the emergence of resource interfaces with benefits for both direct and indirect involved companies, is a phenomenon that has been recognised by scholars engaged in studies of Italian districts (Lorenzoni & Baden Fuller 1995; Lorenzoni and Lipparini 1999; Furlan, Grandelli & Campagnolo 2009). Another example is the non-governmental organisations' introduction of micro loans, built on establishing vertical across organisational interfaces among the provider of the loans, the emerging company, often run by an impoverished woman equipped with some type of technology, and its counterparts, providing opportunities to create positive benefits for each side of the interface (Gudeman 2001).

However, it is also recognised, as underlined in the discussion of interaction types above, that company interaction that, for social or legal reasons, is only focused on creating benefits for the people involved and that does not include plans to include improvements of direct and indirect related resource interfaces, can be detrimental for the ability to create benefits over time (Hasselberg & Peterson 2006). Another dark and recognised social aspect is that a supplier-customer interaction that is beneficial for the interacting parties can be detrimental for the social context. There are plenty of examples of how the emergence of close relationships between, for example, large MNCs and local companies have had a very negative impact on established social interaction patterns (Huemer & Cox 2007). However, it is important to note that even when the social and political aspects of a context are not problematised but taken for granted, which is often the case in studies of supplier-customer interaction in western societies, it affects and is affected by such interactions. Thus, an important contribution of studies of supplier-customer interactions, where the social and/or

political aspect has a strong supportive or negative impact, is that they can increase the awareness of what's required from society to breed innovative and efficient interaction patterns.

Although the social and political aspects of interaction patterns have been recognised in the IMP setting, it is the technological aspect that has been most systematically studied, including how it is related to the first two. In the first IMP study the technological aspect of supplier-customer interaction was one of the basic conditions in focus of the investigation of almost a thousand supplier-customer interactions (Håkansson ed. 1982; Hallen, Johanson, Seyed-Mohammed 1991). Later a number of studies in different technological and industrial areas were undertaken with the common denominator that the technological aspect appeared as central in terms of both shaping the interaction and dominating its content (e.g. Håkansson 1987; Waluszewski 1989; Lundgren 1994; Laage-Hellman 1989, 1997; Strömsten & Håkansson 2007). How the social and political aspects influence the direct and indirect interaction concerning technological solutions, involving actors from transnational to national governments, non-governmental organisations and business, was in focus in Håkansson & Waluszewski 2002, where an environmentally related innovation journey was presented. The study focused on the emergence of 'green' papers in Europe; how the green aspect was defined, how established and new supplier-customer interactions were influenced by changing social and political forces, and how established technologies directed these forces towards support for the main part of investments in place. Social forces, based on an increased awareness of environmental threats, were canalised through Greenpeace and Friends of the Earth, among others, and excluding the use of chlorine as a bleaching chemical and increasing the use of recycled waste paper became two concrete ways of addressing a green agenda. Governmental actors on a transnational level, such as the EU, and within individual member states, such as Germany, UK, Netherlands, France and Sweden, engaged in both the recycling and chlorine questions, among others, through new legislation. In the business landscape, companies being close to the end-consumers rapidly took the latters' part. This included IKEA, with its catalogue, and Springer, with numbers of magazines and book publications, who declared that in the future they would only utilise 'green' papers, based on chlorine-free paper with a certain content of recycled paper. With all this pressure on the bleaching technology, for decades both small and large paper producers engaged in a search for a production process based on this chlorine, that could be adapted to chlorine-free bleaching. The social and political pressure, however, also forced one of the largest producers of

bleaching chemicals, Eka Nobel, to engage in the process, with the motivation that if one of the company's main chemicals should be abandoned the alternative should be based on another chemical it had in production. Thus, paradoxically, the largest supplier of chlorine became engaged in developing an alternative method in interaction with its customers, based on peroxide and a low level of chlorine. The European formulation of a 'green' paper as being based on a chlorine-free paper eventually resulted in a variety of 'green' products, from a 'low level of chlorine bleached paper' to 'totally chlorine free'. It is interesting to note that in the US the social pressure on the same industry was more concerned with emissions in the air, while the chlorine debate, which was so intense in Europe, was almost not recognised (Håkansson & Waluszewski 2002).

4. Interaction effects – the possibility of developing normative recommendations

The last section presented a view of the existing interaction pattern as being the result of a combination of the earlier interactions, the ambitions of interacting companies and the technological, political and social context. It was also stated that the existing interaction pattern has some obvious collective effects. The existing interaction pattern resulted in some systematic changes in the network, where two main types of sources can be distinguished.

i. The dynamics of the interaction pattern in itself. The interaction pattern has, so to speak, changes 'built into' them. The heart of interaction is to react on changes in resources in relation to others that, as discussed in the identification of interaction types above, can be done in more or less extensive ways.

ii. The context of the interaction pattern. The economic interaction pattern is embedded into a context characterised by certain social, political, and technological developments and movements.

Both of these sources are creating development in the interaction pattern. Both short and long term effects are created, many of which follow a certain direction, while others, as becomes visible only in retrospect, can break up old and create new paths. Thus, under a surface of mundane, everyday business interactions, new technological, social and political movements, together with the interacting parties' ordinary problem-solving processes, over time result in more or less radical changes affecting both the business landscape and society at large. The interaction pattern can create new technological trajectories (innovations), continue their development (or result in their decline) as a result of the imprints made on products and

facilities. Furthermore these interactions are also part of successive specialisation and productivity. Hence, the total business landscape, including the producing and using structures, is successively developed through interaction regarding how to utilise material and immaterial investments both in the short and long run. Finally, the actors involved in the interaction pattern form different types of power structures. Imprints are created on related material and immaterial investments through how they are positioned and re-positioned, and patterns of co-evolution are created. The interaction pattern may, in this way, be directly connected to some important output variables (see Figure 3).

Figure 3 here

This implies that it is possible to formulate some normative recommendations for how to relate to it. These recommendations can be directed to single companies, industry associations, non-governmental interest groups and governmental policy on national and transnational levels. Furthermore, the ability to formulate normative recommendations is a door to a whole new field of research concerning how specific interaction patterns can be utilised as an opportunity to influence innovation, productivity and power. Below we will make some suggestions for how characteristics of interaction patterns can constitute the basis for normative recommendations regarding these aspects.

4.1 Innovative effects

The interaction pattern is characterised by attempts to create and utilise interfaces among resources whose effects cannot be outlined in advanced. Thus, along with combinations and re-combinations of resources the interaction pattern also breeds changes in them. In other words, the innovation processes are embedded into the interaction pattern. The latter is both a source of potential innovations and a ‘frame’ into which anything new has to be embedded in order to become an innovation (Van de Ven et al. 1999; Håkansson & Waluszewski 2002). Studies with a historical perspective have recognised that innovations are never neutral, but over time are both grounded in and directed by imprints of interaction (Rosenberg 1982, 1984; Dosi 1982; David 1985; Arthur 1988; Hughes 1983, 1987, 2004).

The characteristic of the interaction pattern is crucial for how ‘supportive’ it will be for a specific business actor that wants to create change (Håkansson 1987; Johanson & Waluszewski 2007; Hoholm 2011; Forsström 2005; Vercauteren A. & Vanhaverbeke W.

2007). It is also critical for the non-governmental group that wants to create a particular change for environmental and/or social reasons (von Raesfeldt 1998; Harrison & Easton 2002; Håkansson & Waluszewski 2002). Finally, it is of great importance for policy actors on a national or transnational level who want to breed innovation in order to reach both economic and social effects within certain nations and regions (Waluszewski, Baraldi, Linne & Shih 2009; Waluszewski 2011).

An early indication made from the studies presented in appendix 1 is that a network dominated by interaction types with an extensive content is more innovative than a network dominated by 'thin' interaction. In a network characterised by 'thick' interaction, the actors are involved in interaction patterns where more or less all technological and organisational dimensions are taken into consideration. Thus, the interaction pattern will force the actors to engage in development processes concerning material and immaterial resources, production processes, products and services included.

Consequently, these studies indicate that the 'thinner' the interaction, the less reason there is for the involved counterparts to develop in terms of both technological and/or organisational solutions. To be an innovative actor in such context implies that development of something new has to be done without the deeper involvement and experiences of others, requiring that all affected counterparts first can absorb the new without making major changes in relation to counterparts, and second that the new still will create benefits.

Finally, it is important to note that the above conclusions are only tentative and are not explicitly investigated in empirical studies starting out from these questions. Thus, we lack studies of how specific interaction patterns are related to the innovativeness of larger networks – something that probably is one of the most important areas for future research.

4.2 Productivity effects

The specialisation that characterises contemporary interaction patterns has an interesting effect on productivity. As specialisation leads to a narrower production and/or service, the business units involved become more and more dependent on the counterparts on both the input and output sides. One consequence is that productivity becomes more about how internal activities are related to external activities undertaken before, after and in parallel, than how they are designed themselves. In other words, the degree of interdependency in the interaction pattern will affect productivity. For example, it is possible to achieve economies of

integration by exploiting serial interdependencies at the same time as economies of scale as well as economies of scope may be achieved by exploiting pooled interdependencies. Finally, both of the above can be combined with the exploitation of reciprocal interdependencies through the economies of adaptability and change. The last aspect underlines the importance of being agile and responsive to change in performed activities (Håkansson & Persson 2004).

Consequently, productivity can be achieved in different ways due to the characteristics of the used resources. If all the used resources are homogeneous, only the pure exchange type of interaction creates optimal productivity, as shown with such elegance by market theory. However, as soon as some of the used resources are heterogeneous (Alchian and Demsetz 1972) the content of the interaction will have a serious effect on productivity and efficiency, as exemplified in relation to the interdependencies above. Thus, to make the interactions more 'pure' is not creating optimal productivity in most areas, we would claim. Instead, through interactions with more content the productivity is increased for single companies as well as in relationships and chains (Dubois 1998; Gadde, Håkansson & Persson 2010).

However, here we have the possibilities of combining different types of interaction with different types of productivity. Thus, we can not expect the same type of general dependence as we expect for the innovation area. Instead we probably will get very mixed combinations of the three types of productive economies in combination with different types of interaction patterns.

These effects can be expected to become larger over time as well as larger in more extensive networks when relationships are successively connected to each other. Through these connections the used resources are adapted across company borders and also across chains that will increase productivity. Thus, these effects become even larger if the parties involved match their future plans, as was described in the case of IKEA's coffee table Lack (Baraldi & Waluszewski 2007). The investments made by the companies will, in this way, build on each other, making the total structure 'better' from the involved companies' points of view (Jahre, Gadde, Håkansson, Harrison & Persson 2006). Since the possibilities of such productivity effects are huge, this area is also a door to future research on opportunities to exploit different types of network interdependencies.

4.3. Power

The most undeveloped area of implications of the interaction pattern concerns power (Olsen 2011). The interaction pattern not only has a strong impact over innovation and productivity, but also over the distribution of power. Clearly, revenues are created both through innovations and increased productivity but there is no guarantee for the single actor that it will get its share. Power is needed in order to gain influence over the revenue streams. Thus, how the single company is embedded into the interaction pattern is crucial for power and thereby profit (Bocconcelli & Håkansson 2008; Awaleh 2008; Ingemansson & Waluszewski 2009; Strömsten & Waluszewski 2012). This implies that the position of the actors involved, in relation to direct and indirect counterparts, is of critical importance (Mattsson 1989; Henders & Håkansson 1995).

Thus, a critical implication is that there is no even or fair distribution of profit of interaction patterns in relation to the extensiveness of the interactions. An extensive interaction pattern, including both innovation and productivity endeavours, does not distribute the power and profit in a fair way due to the engagement in each single dyad or by each single actor. Instead, the extensiveness can have very different roles in relation to the distribution of costs and benefits; while some actors, due to their role in the network, are responsible for the main costs, others take care of the main benefits. Thus, what the studies referred to in this paper indicate is that the ways profit relates to interaction patterns are very complex and unevenly distributed. The uneven aspect becomes even more challenging when we include actors such as publicly funded policy bodies, with a governmental commission to spur innovation and productivity within a certain geographical area or a certain industry. A huge challenge is that the interaction patterns they want to influence are globally embedded, while the outcome in terms of innovation, productivity *and* profit/power is assumed to occur within certain national, regional or local borders. Thus, for policy actors, how to hinder power/profit to 'gravitate' from the place where the main publicly funded investments are made is of critical importance (Waluszewski 2011).

5. Conclusions

The never ending story, or the dynamics of the business landscape, has a main distinct source – interaction. And it is a source with distributed and multifaceted effects – wanted by some, unwanted by others. Interaction means to react on the involved counterparts' acting. Thus, the interaction process has effects on each resource involved. Therefore, each single interaction has a different effect for each actor with an interest in the involved resources. Furthermore, no

interaction is an island; the resources and those representing them are involved in other interaction processes and are bringing with them what's achieved in earlier interactions. This means that the outcome of one interaction process creates effects – but different ones– in other interaction processes. These distributed effects will be beneficial for some interaction processes, while for others they will create severe obstacles. Thus, the never ending story is far from a simple, linear chain of actions; it is a complex pattern of actions and reactions where the effects on the resources involved are distributed among different interactions – for better and for worse.

Thus, every single interaction is a part of some larger interaction patterns that are far away from harmonised machineries but rather appear as mixes of forced connections. These forced connections among interactions create interaction patterns that influence and direct the development of both single business actors and the larger business landscape. The features of these larger interaction patterns, which are not designed by any individual business or political actors, shape innovation, influence productivity, and determine the profit distribution. Thus, together interactions related to buying and selling – where each can appear as quite mundane are forming larger interaction patterns that are significant for the contemporary business landscape as well as for how it will develop.

A major conclusion is that the scientific knowledge about these interaction processes– how they are forced into patterns and how these patterns create innovations and productivity and distribute profits is quite limited, and in some aspects even completely missing. Thus, a related main conclusion must be that we have a challenging research task in front of us. We have to find much more precise ways to describe, characterise and analyse single interactions as well as patterns of interaction – and above all, their consequences for single companies, for the larger business landscape, for specific places, for nations, for governments, and last but not least, for society at large including democracy.

On this route we have just taken the first steps and gained a first basic knowledge of business interaction processes. In this article we started out from a simple research model and we end in a much more complex one (see Figure 4). In this model we have put interaction at the centre where it is highly influenced by some external factors and, in turn, is creating some outcomes that affect the basic influencing factors. This process looks as if it's completely dependent on the characteristics of the interaction. It is the content of the interaction that determines the outcome and thereby also the speed and direction of the development process.

Furthermore, every such process is just one sequence in a never ending story of economic development where interaction is the main driving force.

However, as mentioned above, our research is still in an initial phase and there is so much more to do. This is especially true for how interaction patterns are related to economic outcomes and societal development. Here we have numerous studies in front of us concerning how interaction patterns are related first to innovations, in what direction, reflecting what interests, and second to productivity, with what consequences for particular companies and spaces, and finally to power and profit distribution, from and to whom are they distributed. The only problem is that the results of these studies are already needed today.

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APPENDIX 1: Dissertations

Awaleh, F., 2008, *'Interacting Strategically within Dyadic Business relationships: A Case Study from the Norwegian Electronic Industry (PhD-dissertation)'*. Oslo: Norwegian School of Management, BI

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Table 1: Six types of interactions and affected resources (source: Cantillon & Håkansson, 2009)

Type of resources affected: ***Type of interaction:***	**Products**	**Facilities**	**Business units**	**Business relationships**
Pure exchange	No change	No change	No change	None
Exchange with some social elements	No change	No change	Minor change	Single
Buying and selling	Change	No change	Minor change	Single
Producing and using	Change	Change	Minor change	Single
Cooperation	Change	Change	Change	Single/multiple
Networking	Change	Change	Change	Multiple

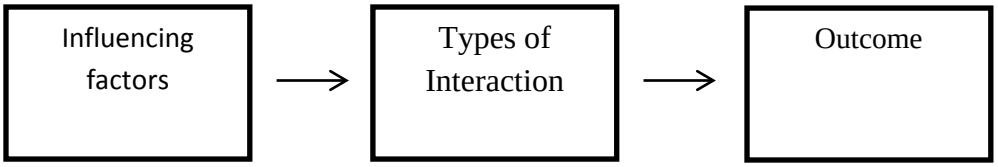

Figure 1: Research model

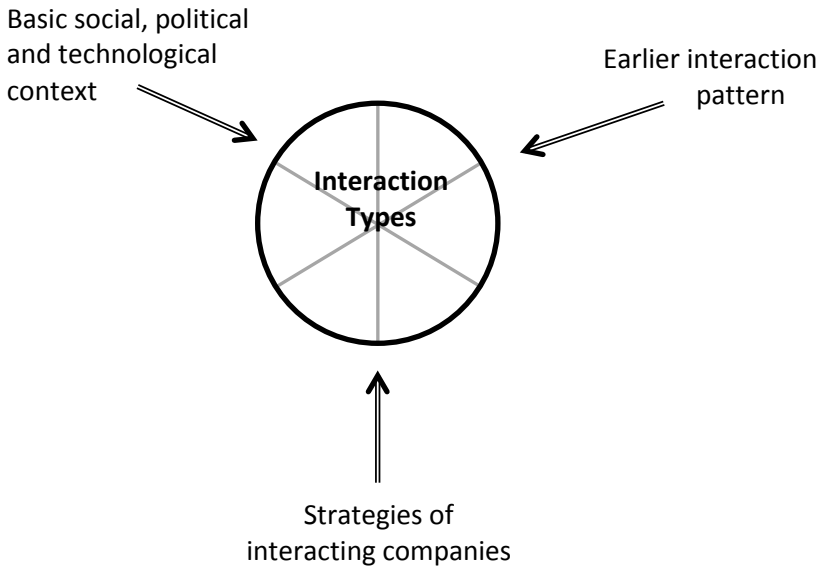

Figure 2: Influencing factors

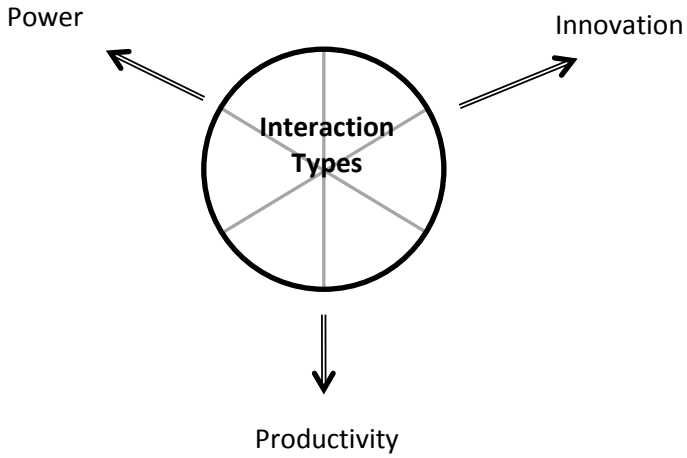

Figure 3: Outcomes

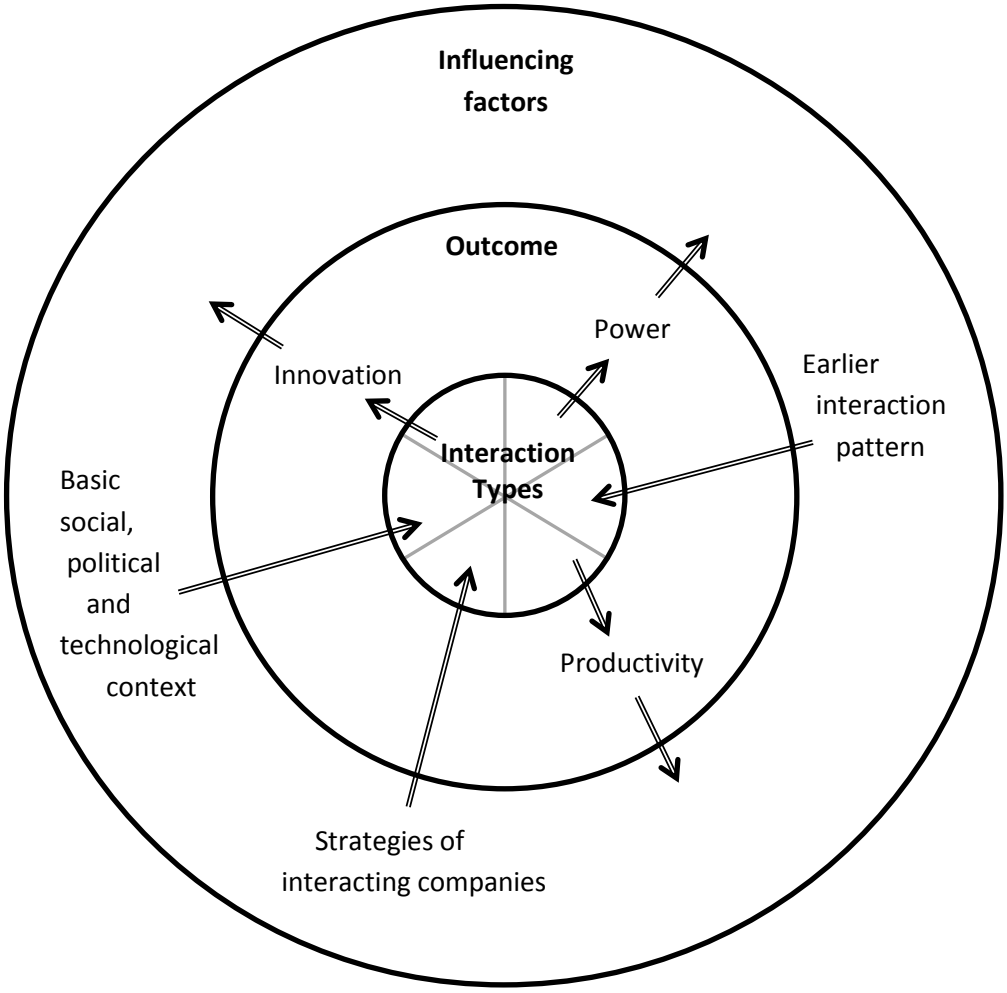

Figure 4: Developed research model