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Partnering models in Nordic construction

Voluntary integrated buyer–supplier collaboration in building markets

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Abstract

Traditionally, procurement and contractual policies adopted by building and construction clients produce a system in which clients procure design services separately from construction services, while operation and maintenance have been subject to further, separate procurement actions. These fragmented structures have in recent years been criticised for leading to lack of co-ordination and conflict and ensuing litigation among parties to the construction project, and overall inefficiency in delivery. As a consequence there have been moves to promote more integrated collaborative forms of project delivery, often in combination with the introduction of private finance in hitherto publicly funded buildings and infrastructure works (PPP, PFI). Some construction clients have taken this a step further and adopted a much more collaborative approach towards project delivery, often known as partnering. This can involve contractual changes, but is more often primarily founded on agreements and commitments outside the contract framework.

The paper presents evidence from an explorative study of partnering and partnerships in five Nordic countries. The study was implemented in a collaborative network of local research and industry partners including major building clients. Data were collected by means of national reviews of partnering policies and practices, thematic analyses, and case studies. The concept partnering was introduced in a Nordic context in the 1990s and has since then been implemented in a large number of projects. Clients sought to establish a culture of openness and trust within the project and tried promoting this with various kinds of incentives. In some countries the move towards voluntary collaboration was, paradoxically, strongly advocated by public authorities. Generally, however, the concept of partnering was used somewhat ambiguously in the Nordic building industries covering roughly any kind of business relation from alliances, consortia, framework agreements to project partnering.

Key words: partnering, construction, collaboration

1. Introduction

Recently the interest in partnering between buyers and suppliers in the building industry has grown considerably in the Nordic countries. Public authorities and industry associations have engaged with big enthusiasm in an endeavour to further partnering as a method to solve a whole range of problems that often confront building projects and building clients. Traditionally, procurement and contractual policies adopted by building and construction clients produce a system in which clients procure design services separately from construction services, while operation and maintenance have been subject to further, separate procurement actions. These fragmented structures have in recent years been criticised for leading to lack of co-ordination and conflict and ensuing litigation among parties to the construction project, and overall inefficiency in delivery. As a consequence there have been moves to promote more integrated collaborative forms of project delivery, often in combination with the introduction of private finance in hitherto publicly funded buildings and infrastructure works, for example in the UK Public Private Partnerships and Private Funding Initiatives. Some construction clients have taken this a step further and adopted a much more collaborative approach towards project delivery, often known as partnering. This can involve contractual changes, but is more often primarily founded on agreements and commitments outside the contract framework. In this field an array of new project methodologies, management techniques, and new training and educational products have occurred. The paper presents preliminary findings from an explorative study of partnering and partnerships in the Nordic countries.

The next section first discusses the concept of partnering its origin and application. In the literature there is some accord that partnering is an ambiguous concept which is used by different actors with different meanings. Thereafter I consider alternative conceptual frameworks within which to analyse the dynamics of such emergent forms of voluntary inter-firm collaboration in the building industry. The one approach is basically the transaction cost economics argument that when the costs of organising infrequent transactions internally are higher than the costs of an externalised solution activities are susceptible to vertical disintegration, i.e. a buy-alternative will be preferred for a make solution. However, construction markets are characterised by high levels of uncertainty and therefore construction clients search for ways to gain better control of or transfer of risk through alternative organisational arrangements. The intention of partnering is to build up trust levels in order to reduce uncertainty related to both price and quality of the product. Another way of understanding the implementation of partnering is to see it, rather than the result of purely economic considerations, as the result of a strong institutional pressure from government and client's associations to bring about a model that transfers risk upwards in the supply-chain to contractors, engineers and designers. It is the belief that a process innovation such as partnering may pull innovation and change in construction more generally. This may, however, be counteracted by the fact that many actors in the construction industry traditionally are very reluctant to adopt new ideas and knowledge from outside the industry in combination with a strong impetus to transform issues of human interaction into technical project management issues.

The following section presents preliminary findings from a study implemented in a Nordic collaborative network of local research and industry partners including major building clients. Data were collected through national reviews of partnering policies and practices, thematic workshops and analyses and case studies. Data show that there are almost as many ways of implementing a partnering strategy as there are cases in the study. Moreover it appears that major changes in construction may be emerging in terms of the integration of traditional building products with new services into new more complex 'products' that meet clients' and users' needs more comprehensively. In the last section the conclusions are drawn and the implications for strategy and organisational learning and knowledge are briefly discussed.

2. Conceptual issues

2.1. *Origin of partnering in construction*

Since the late 1980s partnering has been introduced and debated as yet another instrument to further much needed change in a construction industry characterised by delays, defects, budget overruns and poor reputation. The partnering debate and practice has taken place in national construction industry firms and associations across Europe, North America and Australia, probably first in the US and the UK. Nevertheless, as observed by for example McGeorge & Palmer (2002:226), there is really nothing new in partnering as it has been customary in numerous industries and markets that trust-based, non-adversarial, non-contractual relationships often are preferable to contractual relationships. Not only can trust-based relationships between economic actors save money otherwise spent on costly contract negotiation, surveillance and control for both supplier and buyer but such relationships do also provide benefits following from trustful exchange of knowledge and mutually understanding whereby they often stimulate an innovative environment and practice. In some places it does seem, though, that partnering and trust are new concepts to an industry with widespread adversarial practices.

The term partnering has been used in construction to denote a formalised relationship – often between buyer (owner/client) and one or more suppliers (contractor, designer, etc) – with the objective to minimise litigation, disputes, defects and budget overruns and to improve trust, foster co-operative bonds, and facilitate successful completion of projects at time with better quality and reduced reworks. One might say that a partnering agreement is a contract meant to render superfluous a number of other contracts. While it is only relatively recent that partnering was introduced in the construction industry different forms of trust-based co-operative arrangements have been in use in most other industries, for example in car manufacturing (Dyer & Chu 2002) to exchange knowledge and promote mutually beneficial interaction and lower both contract costs and other transactions costs. There is not total agreement about when and where partnering first entered construction. One view is that it happened in the late 1980s on the initiative of major buyers (clients) such as the US Army Corps of Engineers that wanted to cope with growing dissatisfaction with cost overruns, project delays. Later followed other government buyers in the US, then in the UK, and later in Nordic countries and mainland Europe (Skeggs 2001).

One of the first written sources that introduces the partnering concept and offers a guideline and explains the advantages of partnering is The Associated General Contractors of America (1991). Partnering attempts to "create an environment where trust and teamwork prevent disputes, foster a cooperative bond to everyone's benefit, and facilitate the completion of a successful project." (AGCA 1991:2).

Others have the opinion that partnering rather has its foundation in the Japanese 'Kaizen' supply-chain management philosophy which is closely associated with Total Quality Management principles. After the partnering-model has spread to the US and Australia it hit the UK in the early 1990s, where particularly the Latham report (1994) was instrumental in facilitating the diffusion of the new idea among public sector construction clients (Naoum 2003:71-72).

AGCA not only promoted the idea of partnering but also warned that at least three pitfalls endanger the potential success of partnering: "(i) some actors in the construction industry may be conditioned in an adversarial environment and therefore be uncomfortable with the perceived risk in trusting, (ii) treating partnering as a fad, (iii) if the thinking that it is necessary to win every battle, every day at the other stakeholders' expense prevails it will be difficult to make partnering work" (AGCA 1991:5). These concerns are highly relevant because, as Phua puts it, "despite the strong advocacy of partnering use and of the purported benefits that it brings, it seems ironic that its implementation has remained, at best, at a modest rate across construction industries" (Phua 2003:622). Similarly Bresnen and Marshall (2000:231) point out that the term partnering is used somewhat ambiguous and this

makes it difficult to distinguish between partnering as a distinctive practice and partnering as managerial rhetoric. It could be added that even partnering practices may be implemented very differently depending on the specific context in terms of local business and institutional environment etc.

In the Nordic countries the example of the Latham and Egan reports has by and large been followed in the sense that in the official rhetoric of both public policy makers and construction industry business associations has emphasised that the introduction of partnering would have widespread beneficial effects for construction clients in particular and for the construction industry in general.

In the Nordic countries, Iceland, Finland, Norway, Sweden and Denmark, there is a strong tradition for a wide-ranging public sector involvement in the economy due to the welfare models that include extensive public regulation of market forces. This obviously also encompass construction activities in a wide array of economic public activity fields particularly within education and research, health and welfare institutions, public administration and infrastructure in general. Government construction clients make up a large proportion of the market. In some countries partnering has been heavily promoted by government policies by means of both directives and guidelines. As a consequence of this it should also be expected that new market opportunities will emerge for example a market for private business services addressing the need for advice, consultancy, training and education in relation to partnering.

2.2. Partnering definitions

In the literature partnering is defined in a number of different ways. For most purposes it seems fruitful to be relatively open-minded when it comes to defining the concept of partnering. Based on a review of a number of academic contributions Nyström (2003) concludes that whereas there are a number of variants of partnering and many different components there are only two key components that all authors mention when they define partnering, namely trust and mutual understanding. Trust and mutual understanding are obviously strongly interrelated concepts, as a better mutual understanding between two or more partners generally should be expected to enhance trust between them and vice versa.

Åkerstrøm (2006) defines a partnership as an agreement about in the future entering agreements about the future. One important consequence of this is that whenever the business partners want to enter another new agreement a range of search, negotiation and even some control costs are eliminated *ex ante* since the partner is already known and uncertainty thereby considerably reduced. Åkerstrøm uses the term partnership but in practical terms partnerships are quite parallel to partnering with the possible difference that a partnership is a more lasting business alliance not confined to a single project.

"Strategic or multi-project partnering occurs where the partnering team is in a position to enter into an undertaking for a series of projects, either new build or a rolling maintenance agreement and, as with single project partner-ing, can operate within conventional procurement agreements. Although there are significant benefits to be gained from strategic partnering, there are also significant hurdles to be overcome in its implementation, particularly with respect to national and international laws relating to free trade." (McGeorge & Palmer 2002:244)

For example in the USA, partly as a result of anti-trust laws, over 90% of all partnering projects are of single project nature. Also in the UK Government policy stresses that competition is the way to achieve best value for money and to improve the competitiveness of Government suppliers (McGeorge & Palmer 2002).

It seems that we have some fairly clear-cut definitions of partnering and partnerships, but it still remains uncertain why partnering develops and how it works in practice. In the analytically oriented literature there is a differentiation of economic and institutional

arguments. In the practically oriented literature partnering the main issues are new forms of contracts and incentives, the role of the client as 'change agent', and particularly the need for new project management tools that take in partnering practices and makes trust and mutual understanding grow in each building project. I will explore some of these theoretical arguments a bit more in the following.

2.3. Partnering and the economic organisation of production in construction

It could be argued that partnering is just another empirical manifestation of the make–buy dilemma that any firm constantly is confronted with. Which governance structure is preferable in any given transaction; is it favourable to let the market govern the transaction in question or should the function be integrated in the firm's own production? The choice of partnering as a specific governance form is, however, not just the outcome of a choice between two dichotomous alternatives the market (buy) or the hierarchy (make) but rather just one of several options in-between the two extremes. Along the line between the two are all sorts of organisational alternative complex networks of co-operation and association such as partnering agreements, partnerships, strategic alliances etc. These may integrate upstream by including part of the supply-chain or downstream perhaps as far as to the inclusion of customers and users in order to achieve better control of markets. Why do such alliances exist?

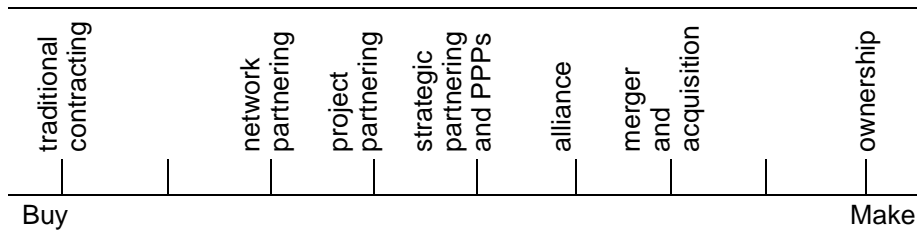
"They exist because of the need to co-ordinate closely complementary but dissimilar activities. This co-ordination cannot be left entirely to directions within firms because activities are dissimilar, and cannot be left to market forces in that it requires not the balancing of the aggregate supply of something with the aggregate demand for it but rather the matching, both qualitative and quantitative, of individual enterprise plans." (Richardson 1972:892)

Williamson (1975) says that particularly three criteria are decisive when choice of governance mode of a transaction is decided: frequency, uncertainty, and asset specificity. The more frequently a transaction occurs the more the firm will be inclined to integrate it into the organisation whereas infrequently occurring transactions most economically can be left to other actors in the market. From the point of view of most construction clients construction projects occur infrequently, perhaps even as infrequently as once in a lifetime. This obviously makes it relevant to choose a specialised supplier of the construction product. At the outset uncertainty in construction production should not be expected to be high as it is a low technology industry and the market does not change dramatically at least in the short run. On the other hand uncertainty in the single construction project has proven to be dramatically high as budget overruns, delays and deficient products seems to be the rule rather than the exception. In other words there is a strong incentive to get access to better control with construction projects, in fact no matter whether they are procured internally or externally. Big uncertainty might indicate preference of the make-alternative. This is, however, contradicted by the amount of necessary transaction specific investments. A big proportion of the necessary investments for a construction project are specific to that particular transaction, or at least not exploitable in other transactions of the client (frequency). So the likely result would be a buy-decision. It is therefore not surprising that only very few construction product users make their own construction products and if so this may well be due to non-economic preferences, for example as in the case of do-it-yourself users.

The asymmetrical distribution of information between the construction supplier, the contractor, and the client may nevertheless place the client in a vulnerable situation in which it is difficult to sanction opportunistic behaviour from the contractor's side. The transaction is mostly not repeated and the threat to choose another supplier therefore has not got any effect. In relations between the contractor firm and its suppliers the situation is different as co-operation may proceed over several projects if experiences are good and an ongoing reciprocal recurring exchange therefore produces increasing trust. This will reduce transactions costs, particularly costs related to the monitoring of contracts, costs related to conflict and litigation etc. As it appears there may be an important difference in the nature of

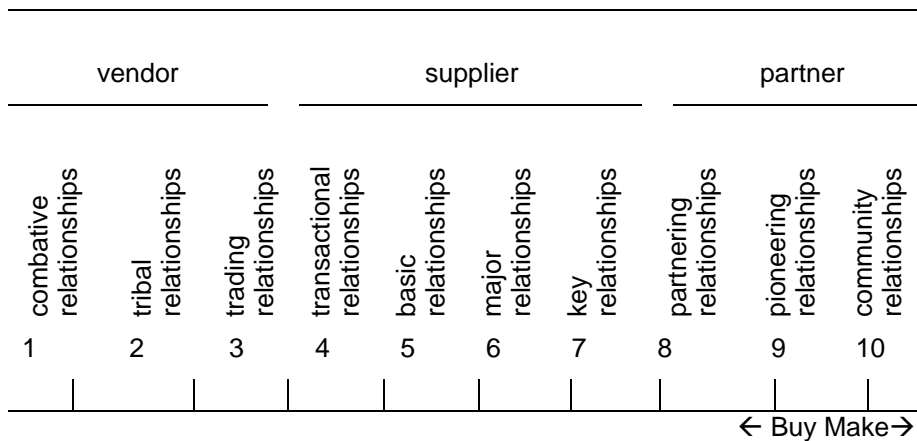
the inter-organisational alliance depending on whether it is between the contractor and a client or between the contractor and its suppliers simply for the reason that the first is repeated whereas the second mostly is not repeated.

Figure 1. Make-buy continuum



Richardson states that "one may observe that inter-firm co-operation is concerned very often with the transfer, exchange or pooling of technology" (Richardson 1972:892) where technology obviously also includes or consists of knowledge – or information if a distinction between knowledge and information is considered appropriate.

Figure 2. Inter-firm collaboration



Source: Lendrum (2000:13-31)

Because of the transfer and exchange of technology and knowledge trust becomes important as the market for knowledge inevitably is characterise by informational asymmetries. High levels of trust may help decrease boundaries for trade despite information asymmetry. Nyström's definition of partnering grasps the essence of the partnering phenomenon: to reduce transactions costs by increasing trust and mutual understanding thereby rendering superfluous (parts of the) contractual regulation. From another point of view this is also very much in line with the open innovation (Chesbrough, Vanhaverbeeke and West 2006) approach which favours actors that engage in collaborative networks (or Latour's work-nets, see Duguid 2005).

The importance of trust

Trust is about dealing with risk and uncertainty and accepting vulnerability. Newell, Robertson, Scarborough and Swan (2002:56) quote Luhmann for that trust is an "attitudinal mechanism that allows individuals to subjectively assess whether or not to expose themselves to situations where possible damage may outweigh the advantage" and Mayer, Davies and Schormann for this definition: "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor irrespective of the ability to monitor and control that other party". In other words to trust somebody is to be willing to take a risk because one expects the other to behave in a mutually accept-able manner. Trust does not come by itself but has

to be founded in either, contractual agreements, a belief in the competence of those involved, or belief in the goodwill of those involved (Newell, et. al. (2002:57) or possibly combinations of the three. (Dyer & Chu 2002) finds that the theoretical assumption that trustworthiness lowers transaction costs in exchange relationships is confirmed in the case of the automotive industry. Trust particularly reduces post transaction costs and increase information sharing in supplier-buyer relationships. They do stress, however, that their findings may apply only to other industries producing similarly complex products in which there is a high degree of mutual interdependence on the part of the immediate component makers and final assemblers. Whether construction is a complex product industry like the automobile industry, aircraft, heavy machinery, robotics, supercomputers etc., may be debatable although it is often argued, that construction is a complex systems industry (see for example Winch 1998, Gann & Salter 2000). Consequently the production process in construction is often portrayed as much more complex compared to many manufacturing industries hence the big risk of defects, time delays, and budget overruns in construction projects (Dyer & Chu 2002). In any case construction also shares characteristics with many services producing industries in that they are jeopardized by 'moral hazards'; it is impossible ex ante to ascertain the quality of the building, it may difficult to observe the actions of the provider, and building can seldom be returned if quality is not satisfactory. These factors legitimate the client's aim to get more control with the building process or, more realistically, transfer some of the risk to the provider. When partnering is defined as a relationship characterised by trust and mutual understanding it is only correct in the sense that something in the way the relationship is managed gives the client reason to trust the supplier.

Trust and reputation

The problematic thing about trust is that it preferably should be well-founded in a good reputation which mostly depends on a good track record. Otherwise it will often be difficult for the one part to actually trust the other part and therefore costly and complex contractual arrangements are necessitated. A good reputation makes a firm an attractive business partner because reputation substitutes expensive governmental arrangements (Lichtentaler & Ernst 2007:39). When it comes to inter-firm alliances (such as partnering arrangements) companies with a good reputation are desirable partners (Lichtentaler & Ernst 2007). Reputation becomes even more important in markets where knowledge makes up a central part of the traded commodity, as knowledge markets due to information asymmetries are imperfect. A similar situation characterises markets where it is impossible to ascertain quality ex ante such as construction markets.

In the case of partnering in construction it may vary to which degree it is knowledge that is traded. In commercial relations between clients and design consultants it is almost entirely knowledge that is traded; likewise between consultants and their contractor customers. Between the construction client and the contractor traded commodities obviously are of a much more tangible nature, but still there is a strong element of asymmetry in the distribution of information beforehand, and to some extent even ex ante. When entering the contract with the client the contractor knows much better than the client whether he is capable of and intends to fulfil his contractual obligations and at what terms. The client only realises this much later and even then the client will not have information about the true characteristics of the construction product as defects may turn up only with considerable delay. Thus, asymmetrical information is more often than not a characteristic of many construction markets. Information asymmetries may cause market failure such as adverse selection.

Imperfect information and market failure result in decreasing product quality

The classical illustration of the consequences of asymmetries of information is taken from the insurance market but it has been generalised by economists into markets other than insurance, where similar asymmetries of information may exist. For example, Akerlof (1970) developed the model of the "market for lemons." People buying used cars do not know whether they buy bad cars ("lemons") or good cars, so they will be willing to pay a price that lies in between the price for lemons and good cars, a willingness based on the probability

that a given car is bad or good. If buyers had perfect information they would know the value of a car for certain, and they would simply pay an amount equal to the value of the car.

Adverse selection is about the consequences of asymmetric information. In Akerlof's example the sellers will sell fewer good cars since they think the price is too low, but they will sell more bad cars because they get a very good price for them. After a while, the buyers will realise this, and they will no longer want to pay the old price for a used car. The price will go down to the detriment of sellers of good cars. In the extreme, the sellers of good cars will have been driven out of business. Due to the lack of perfect information the price mechanism fails to keep the lemons off the market.

Obviously the market for construction products differs from the market for used cars. There is no doubt, however, that it is a market characterised by imperfect information. In most cases it is very difficult for buyers to assess the value of a product through examination before sale is made. Moreover – it could be argued – an incentive exists for the seller to pass on a low quality product as a higher quality one.

Warranties are used to shift responsibility for repairing deficient products (such as "lemons") to the seller. Quality assurance, technical standards etc. are other instruments with the same purpose however they are not always effectively addressing all contingencies. Partnering could be seen as an attempt to provide an alternative in order to cope with uncertainty and asymmetric information in buyer-seller relations in construction markets. Thus, an important objective of partnering arrangements is to enhance mutual trust through improved exchange of information, for example "open books", and a collaborative working environment.

Contracts are traditionally the way to deal with asymmetric or hidden information, and its consequences in the form of adverse selection and moral hazard. There is a huge research literature on the issue of contract theory (see for example Bolton and Dewatripont 2005 and Salanié 2005). It is however, beyond the scope of this paper to go into this as our focus here is on partnering which, at the outset, rather intend to limit the use of contracts and the incurred monitoring costs.

2.4. Partnering as a new institutional norm in the construction industry

Institutional theory and institutional organisation theory (Scott 2001, Tolbert and Zucker 1996, March and Olsen 1989) explain both the existence of societal institutions and norms and the way such institutions change over time. Phua (2006) finds that rather than economic incentives institutional norms for partnering are an important contributing factor that determines why and how firms are likely to use partnering. Phua further argues that

"firms are inclined to use partnering not so much because they see it as a superior procurement method that brings increased firm profitability or competitiveness per se but rather because they see that there is an advantage in the face of strong industry norms and pressures to use it" (Phua 2006:622).

In other words a more widespread use of partnering should not be expected unless there are strong "systemic, overriding institutional pressures that drive its use". Otherwise partnering is perceived as just one of a range of procurement methods and since the advantages of partnering are still debatable and difficult to measure there is no other reason why firms should prefer partnering over other methods (Phua 2006:622). In a study of the adoption of a new management technique (total quality management) across the subsidiaries of a multinational corporation Dacon, Goodstein and Scott (2002) mention that there was significant variation in the level of institutionalisation of the same practice across countries as well as across organisation units. It appears that it should be expected that organisations interpret and respond to institutional norms in quite different ways and that these are determined by power, interests, and agency.

The construction sector has a notoriously poor reputation in many markets and it is often associated with flaws, defects, delays, budget overruns or, in some countries and regions, even downright fraud and corruption. Even in countries and regions where such questions are less pronounced it is still considered a major concern to reduce delays and budget overruns, particularly in public construction projects. Generally, it seems that the introduction of partnering as an alternative or supplement to traditional governance structures in construction is mainly visible and debated as regards publicly owned construction projects. It is somewhat unclear whether this is due to lack of information on privately owned projects or significantly better performance records in privately owned construction projects. If the latter is the case it either indicates that a new collaborative practice such as partnering is not needed because private clients are satisfied with the quality of the acquired building products. Or that a collaborative practice already exists and that it is superior to the way collaboration takes place in government clients' building projects. In any case the only place where construction clients can play a coordinated role as "lead users" and act on the basis of a big volume demand is in the government sector.

If we maintain the definition agreed upon earlier, that partnering is a way of organising co-operation between two or more partners in a construction project that is characterized by trust and mutual understanding, the next question will inevitably be: How then can trust and mutual understanding be introduced from actors outside the involved partners' own organisations, as Phua suggest encouraged or pressured by industrial or government norms expressed by e.g. business associations or government bodies? Institutional theory suggests that both symbolic systems and relational systems are at work and that both operate through both regulative and normative mechanisms (Scott 2003).

Figure 3. Carriers of institutional change

	Regulative	Normative
Symbolic systems	Rules, laws	Value, expectations, standards
Relational systems	Govenance systems, power systems	Regimes, authority systems

Source: Scott 2003:882

In a symbolic system carriers of institutional change include for example public regulation stating that use of partnering is mandatory in government building and construction projects. Normative carriers would include public policy analysis and proclamations about minimising defects and budget overruns in government projects. Similarly in the relational system big building clients such as major government clients have the power to force new 'voluntary' forms of collaboration upon the contractor, for example in the case of the Oresund fixed link bridge and tunnel between Sweden and Denmark, Terminal 5 in Heathrow Airport or the Danish National Broadcast Company's new headquarters in Copenhagen.

New management concepts to building industry

An important normative institution in the construction industry is the conviction that the project-based production in construction is so different from all other industries that it needs a theory of its own (Koskela and Ballard 2006). Despite the fact that complexity levels, the number of components, actors, and risks may be at least as high in many other industries it is a commonly held belief that production in the construction sector is not only project-based but also more complex than in most other industries (Winch 2006, Gann & Salter 2003, Gann & Salter 2000). An important question therefore is, does partnering offer an alternative approach to mainstream project management theory, an alternative which better understands the often messy, ambiguous, fragmented and political character of activities (Alvesson & Deetz 2000:60) that take place in organisations including both temporary and more permanent project organisations? At least the transfer of knowledge and new management concepts to construction firms, for example new organisational models or project management techniques such as partnering and lean construction, seems to be a complex matter. The diffusion of new knowledge, imported from outside the industry, is not "a

neutral and rational process, but highly socialised and therefore subject to a range of psychological, social and political influences" Bresnen and Marshall (2001:343). This insight is increasingly recognised in management and organisation research but does not yet seem to have penetrated construction research to any noteworthy extent. Koskela and Ballard (2006) excellently illustrate this with their claim that instead of trying to learn from the rich field of existing theory a new and specific theory of construction is needed. The lack of receptivity to ideas from outside may "encourage the search for home-grown solutions which sometimes 'reinvent the wheel' or place too much of an engineering slant upon what are essentially problems of human behaviour" (Bresnen and Marshall 2001: 343). There is a paradox between, on the one hand, the fact that parts of construction industry activities, especially at the site, still rely very much on human labour and, on the other hand, the industry's engineering attitude to management that gives preference to top-down technocratic systems and neglect the distributed character of the firm's knowledge, its human resources (Tsoukas 1996). Thus the real stumbling block for change is not that the nature of production in construction may be different from other industries. It is rather the way the construction

"..community sees itself as different from other industries that reinforce a segregation of construction management knowledge from main-stream management discourse. The danger is that this results either in an inward-looking community that is indifferent, sceptical or hostile to ideas imported from outside; or one that is too ready to embrace new management approaches and ideas from outside without the informed scepticism that is often required" (Bresnen and Marshall 2001:343).

Partnering is but one example. Another is the debate over lean construction which symbolises a very dedicated effort to reorganise production in construction with means originally coming from Toyota's car production. Proponents argue that any process, including the construction process, can be optimized and waste minimized with the implementation of the lean philosophy and methodologies (Womack and Jones 1996; Koskela 1998). Paradoxically some of the strongest promoters of lean construction simultaneously argue that a particular theory of construction is needed (Koskela & Ballard 2006).

First this clearly expresses the inward looking construction community (Bresnen and Marshall 2001) that rejects to accept that the difficulties of the construction sector are trivial and well-known from many other industries that, moreover, have viable management alternatives to offer. Second an idea of a particular construction industry theory takes for granted that construction is a homogeneous sector comparable to other industries. This is in itself an unnecessarily simplifying assumption as construction production is composed of a range of dissimilar activities. These include, in addition to regular building activities, the management of a wide and diverse supply-chain, production of consultant architectural services and consultant engineering services in a range of specialised fields, and many other services. Bundling all these economic activities together, or any huge number of economic activities, naturally produces a monstrous and very complex production system but it does not automatically create a need for new theory of production in construction.

Sceptics argue that there are decisive differences between car production and house production and therefore external methods from other industries do not apply. However, as long as studies continue to show that the proportion of time spent on value-adding activities at construction sites is as low as 20 per cent of the work time (Josephson & Saukkoriipi 2005) there is still some room for improvements.

2.5. Hypotheses

From the preceding discussion it could be expected that partnering would mainly be a matter of building clients trying to transfer risk to their major suppliers, contractors in particular. A strong instrument in this respect is alternative ways of organising the building project transaction. It is not a pure market transaction but an organisational form in which the procurer, the building client, obtains some of the advantages of integration such as better

information and less uncertainty, without having to take the risks of the producer. Partnering offers such a non-contractual, (potentially) trust based relationship. Therefore search, evaluation and monitoring costs are ideally reduced to the benefit of both the procurer and the provider.

Another way of explaining the occurrence and expansion of partnering as procurement method is that a strong institutional pressure forces new forms of "voluntary" collaboration upon the building clients and consequently the construction industry. The institutional pressure is followed by a growth in business services that are meant to facilitate the shift to new forms of collaboration. These are provided internally or externally on a new market for such business services. Paradoxically the growth in services that should improve and speed up the introduction of partnering in reality also contribute to increase transactions costs.

In the following sections it is analysed how the introduction of partnering in Nordic building industry takes place and in what forms the new collaborative inter-firm relations occur.

3. Materials and Methods

Data were collected in a project in which construction clients, client associations and research institutes in five Nordic countries collaborated. The project was supported by Nordic Innovation Centre. Data were compiled through a general survey of partnering initiatives, development, practices and experiences in five Nordic countries – Finland, Iceland, Sweden, Norway, and Denmark. This was supplemented with collection of data and exchange of experience at five thematic Nordic workshops, The themes were 1) international experiences and challenges in relation to new forms of voluntary inter-firm collaboration, 2) Client–supplier partnerships, 3) The client as provider of services, 4) Client–supplier partnering, training and services, 5) Partnering in facilities management and Public Private Partnerships. Finally the study includes in-depth case studies of selected building project in the five Nordic countries. These case studies are still on-going.

4. Nordic partnering models

The concept partnering was introduced in a Nordic context in the 1990s and has since then been implemented in a large number of projects. There has been, and still is, much exchange of experiences in-between government bodies, business associations and firms across country borders. Still it appears that partnering is implemented very differently in the five countries.

4.1. Iceland

The Icelandic construction market is of very limited size as the total population of the country is only just above 300.000 inhabitants. Formal contracting has usually only been used in bigger projects such as construction projects for government, local government and (bigger) firms. These projects have usually been of a size that requires official tendering in accordance with EU regulations. EU requirements do not hinder the use of partnering in the construction process but so far there are no examples in public procurement of partnering in the construction process. There are but a few examples of partnering between construction companies and consultancy forms in relation to the development and construction of office buildings and some private apartment houses.

Public- private partnership (PPP) have been much used in Iceland, They usually require that one or both of the following conditions are fulfilled: (i) co-financing of the project or (ii) the public makes a long-term leasing contract of a facility (often 20-30 years), (iii) the contract includes some special service requirements in addition to usual maintenance and facilities management. PPP on the building market is much more common in Iceland than in Scandinavia, primarily because the model is pushed by banks and financial institutions. The motivation for PPPs was

- Transfer of risk: Politicians and civil servants want to avoid risk. Stable conditions with as few surprises as possible are favoured. In PPP there is a possibility of transferring most or all of the risk over to the private partner (for a price).
- Combination of construction phase and whole-life time operation/facility management: The private sector states that they are more competent on this, but the public sector counters with that the state has competent personnel, they also usually have lower wages and the state employee turn over is lower than on the private market.
- Public sector benefits from private sector: It may be an advantage of mixing public and private business or services in the same facility. The public sector can not utilize these advantages on their own as they are not expected to compete on the private market.
- Organisation focuses on core activities: In e.g. a school the headmaster's time is better used for organisation of the work in teaching rather than taking time for planning maintenance and operation of the facility.
- Future users pay for the facility they use, not the current tax payers
- Competition: The private sector states that PPP will give better competition for the projects, the public sector points out that in some cases there will not be any competition as the companies that are willing to handle the risk are few.
- Cultural policy of the public sector: The public sector wishes, or is expected, to uphold a cultural policy. Regarding architecture this is usually solved by arranging a architectural competitions, how will this be solved in a PPP project?
- Flexibility and immediate solution; the money is ready for use: Flexibility in decision making is bigger for the private entity than the public sector and this is a big advantage of PPP from the public point of view.

4.2 .Norway

The Norwegian approach to partnering in construction was motivated by past experiences with conflict, lack of flexibility on the part of the contractor and high building costs. This in combination with growing end user-influence and a demand for more cost-effective building and high quality architecture necessitated new collaborations methods. The partnering model is successful from a client perspective because it facilitates the transfer of the entire project responsibility to the contractor. Partnering was seen as a well-suited instrument in relation to contractors, whereas Norwegian clients identified a need for a better and more integration of building planning and design in the partnering model. This emphasised the importance of introducing new forms of collaboration very early in a building project, a needed development of the partnering model that was not accomplished yet however.

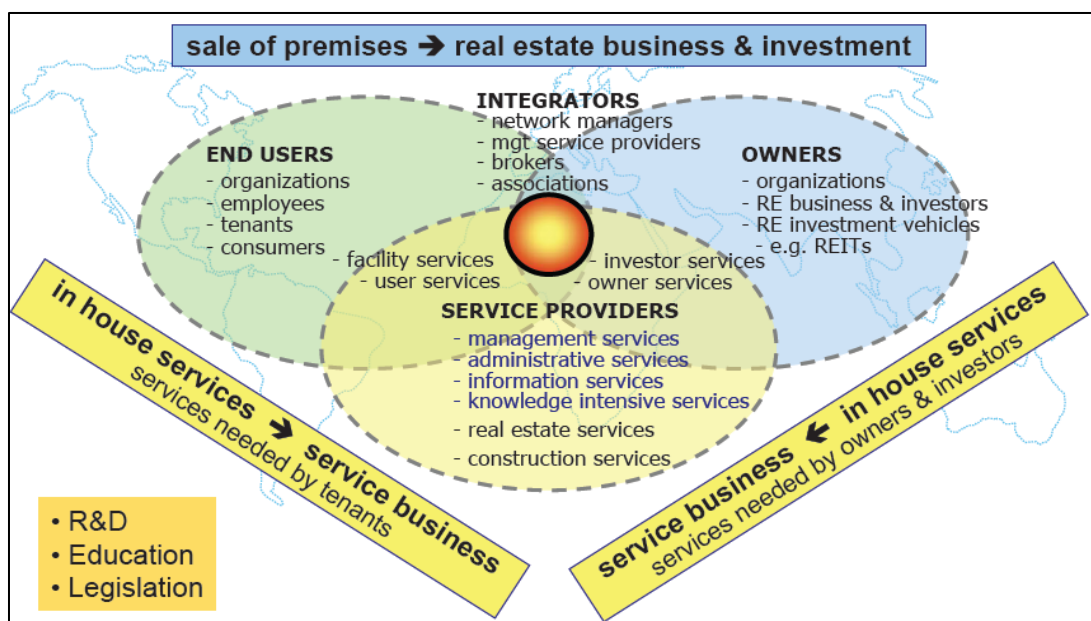
A specially emphasised benefit of the partnering model is that it facilitated stability as regards personnel because the contractor felt inclined to collaborate with the same trade contractors and subcontractors in consecutive projects. This facilitated both learning and trust building and contributed to reduce transactions costs such as search and monitoring costs.

The Norwegian building client wanted to expand the responsibility of the contractor further so as to cover a period of three-five years after project completion. This was motivated by considerations related to both facilities management and whole-life economic assessment. Generally the Norwegian model was very focussed on contractual issues and instruments to transfer risk and obligations to the contractor. It was realised, though that growing and more complex projects might result in much too complex contracts too. If so it would be necessary to split the total project into smaller part-projects and smaller contracts.

4.3 Finland

In the Finnish case study the construction clients' association in Finland, RAKLI, focussed on the entire web of services produced by the building owner whether they were procured in-house or requested from market-based product and service vendors. From this point of view partnering was mainly a matter of establishing stable and reliable long-term relations to relevant types and qualities of business partners and engaging in contracts, framework agreements that run for more than one year. The building owner and building client has in later years moved away from the traditional role towards a role of integrators that knitted

together a larger web of real estate and business services and supplied it to the users of buildings. The business system around the building owner comprised a full range of services related to the construction, procurement, and maintenance of professionally managed buildings and to a large extent also the management of a range of functions taking place inside such buildings. Partnering was seen as a well suited instrument to help building owners and building clients integrate this complex supply of services without the organisation's own bureaucracy and co-ordination costs grew out of control. Partnering is instrumental in securing core business and activity and in line with a lean key resource Ideology. Also in another construction industry context Gann and Salter (2003) describes the same phenomenon that appeared to take place in the Finish construction market. Gann and Salter identified a stream of new upstream and downstream services that have emerged in the built environment similarly to what the Finnish case demonstrated. Gann and Salter contend that project-based, service-enhanced firms, such as those operating in the built environment related markets, represent a major innovative and managerial advance. The Finnish development was illustrated by the owners and clients' association with the following figure.



The managerial challenge for the building owner/client was described with the Prahalad's Velcro-model in which the owner/client is positioned centrally in an extended network of internal and external business partners where the procurement of buildings and construction services is but a small part of the total business activity. In this model partnering became the equivalent of the pattern of hundreds of little hooks and loops that link the different separate parts of the network together – just like in Velcro (imitating the seed of the Burdock plant); These hooks and loops can symbolise formal as well and informal relations, contractual as well as non-contractual, organisational as well personal.

4.4. Sweden

In Sweden partnering was primarily introduced as a consequence of an organised demand-side pull. Construction clients' association strongly encouraged the use of partnering as mode of collaboration in addition to traditional contracting etc. Therefore the association provided extensive guidance, debates and exchange of experiences. Partnering was in use in different construction markets such as big infrastructure projects, and non-profit social housing projects.

The Swedish construction clients association has very actively been promoting partnering because it was a firm conviction that it was and is a superior procurement method. The inspiration to partnering mainly came from the UK and Denmark. Moreover some of the big Swedish contractors have themselves been very actively advocating for the use partnering

and consequently the clients' association wanted to support their members in matching the offensive of the contractors. The ideal partnering agreement was expected to result in a building process in which

- all partners work to obtain a shared goal
- all contribute with their experience
- all take responsibility – cannot blame anyone else
- all relevant information comes to all participants – early in the process
- early problem solving – everybody contributes
- continuity in project is responsibility of all partners
- all partners take pride in working at the project (Fernström 2006).

There is probably little doubt that a building process characterised by these seven expectations to participant behaviour will result in better projects – one way or another. The difficult question to answer is whether better projects are brought about by changes in attitude and project culture or better management, better managers or perhaps more tangible incentives such as shared profits. Perhaps it does not really matter as long as there are no delays, defects and budget overruns. It is nevertheless contributing to complexity that these expected behavioural changes are really soft issues and thus very difficult to manage and measure. It takes quite a lot of courage – on the side of management – to trust employees even in ones own organisation. Here trust is expected to be extended to lots of people in other organisations too. An important source of inter-organisational mistrust in construction projects might originate from the situation in the single organisations with lack of confidence and much too much control and internal contracts instead of trust between management and employees. In any case systematic ex post evaluation of partnering project experiences in Sweden are still missing.

The use of partnering in Swedish building industry has been rapid partly because building clients felt they had to match the large contractor companies and their offensive use of partnering in public relations. As it happened, partnering has also given rise to the birth of new business services or management consultancies meant to assist construction clients and contractors co-operate in (the spirit of) partnering. A recent development seemed to be a preoccupation with so-called soft parameters and ways to measure and manage soft parameters, potentially a big market for business services?

Some actors among Swedish building clients liked to see government intervention in favour of partnering similar to the way Danish government policies have introduced partnering as mandatory in relation to all building projects done for central government clients and recommended for local government clients.

4.5. Denmark

It is mandatory for government clients that construction and building projects are operated in a partnering model.

"The term 'partnering' is used about a type of collaboration in a construction project based on dialogue, trust, openness and with early participation from all actors. The project is carried out under a mutual agreement expressed by mutual activities and based on mutual economic interests" (National Agency for Enterprise and Construction 2004:9)

As can be seen partnering, from a Danish perspective, is very much about exchange of information, mutuality and the sharing of values and goals. In other words partnering is suggested as a (institutional) norm for non-contractual – or rather extra-contractual – collaboration in-between firms. But it is also a norm that cannot be escaped since it is mandatory to adhere to it. Partnering was successfully applied in some big engineering, and infrastructure projects, less successfully in some building projects. A general evaluation across 35 projects showed very good experiences regarding time and budget in some cases, but there were examples of the opposite as well. Although it is not mandatory in these cases

publicly supported social housing associations and local governments are also recommended to use partnering in construction projects. There was big interest in developing relevant tools for partnering projects in areas such as conflict resolution, joint workshops and sharing of knowledge, incentives and forms of contracts better suited for partnering projects.

5. Conclusions

Voluntary collaboration between building buyers and suppliers in the form of partnering seems to have developed and widened rapidly in recent years. This is also the case in the Nordic countries. The origin of partnering was in North America and United Kingdom based on a desire to curb constantly growing costs related to conflict and ensuing litigation among parties to the construction or building project. In short a major driver was motivated by a wish to reduce transactions costs related to the monitoring of contracts, particularly risk and costs related to realisation and ex post control. This could be seen as the building client's attempt to manage risk by transferring it to actors upstream in the supply chain, typically the contractor(s).

A transaction costs economics inspired explanation of the occurrence of partnering offers important insights but it has to be complemented with an institutional view because the primary driver behind the introduction of partnering in most markets has been public authority and business associations rather than independent market-based actors. Partnering develops constantly as a strategic management tool aimed at inter-firm relations.

In the Nordic countries the presented preliminary findings indicate that partnering – in a Nordic context – is dynamic and develops continuously but also a bit hard to get hold of. Partnering is interpreted and practised differently due to different business and political cultures, norms and values. It varies from voluntary trust-based, strategic networks and supply chain management to official government (procurement) policies. Interestingly it seems that partnering gives rise to new project based service-enhanced innovations: add-on services, consultancy services, training etc. as well as possibly a completely new role for building clients and building owners. Alternatively, in the most detailed regulated environments such as the Danish construction industry, there may be a risk that the efficacy of partnering is undermined by a growing web of bureaucratic instruments, specialised management tools and new contracts added-on to the partnering project. Much depends on whether emergent services develop in a market-based setting or as the result of further regulation.

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