

# Integration barriers for purchasing organisation in a large construction company: towards requisite disintegration

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## Abstract

Developing the purchasing organisation is an ongoing challenge for large contractors where internal and external perspectives need to interplay. The aim of this paper is two-fold: firstly, the development of a theoretical framework to characterise the purchasing organisation and secondly, to analyse the limited adoption of integrated purchasing through an analysis of barriers to integration. The theoretical standpoint is underpinned by purchasing organisation theory and by literature on internal and external integration as well as barriers to integration. Based on a two-year case study, the paper presents the status of the purchasing organisation and the barriers to further integration as originating from the strategic purchasers of the contractor. The perceived barriers question full integration internally and externally. The perceived barriers encompass low framework agreement status compared to orders, inconsistent ways of working in the projects and dispersed geographical location and sub-markets. The barriers to integration stem from both attitudinal and industrial matters, whilst institutional barriers are not identified. The paper therefore proposes a differentiated, requisitely disintegrated, purchasing organisation designed to manage the diverse supplier population. In contrast to those advocating a tighter internal and external integration, this paper suggests a requisite balance between integration and specialisation of the purchasing activities.

*Keywords: purchasing organisation, integration, integration barriers, construction industry*

## 1. Introduction

Organisation of purchasing activities internally and externally implies designing functions, tasks, assigning resources and management and carrying out interaction with selected and non-selected suppliers (Håkansson and Snehota, 1995). The interplay between internal organisational functions in purchasing and the external organising towards suppliers, the supplier relations, becomes increasingly important as companies tend to decrease the in-house activities while striving towards profitability in all aspects of their business (Gadde et al., 2010). While some authors view internal as well as external integration as a recipe for purchasing success (Rozemeijer, 2000, Cousins and Spekman, 2003, Holmen and Pedersen, 2010), full integration might not be a universal solution in all contexts (Gadde and Snehota, 2000, Benton and McHenry, 2010). In the context of this paper, internal integration concerns the interaction between the purchasing department and the projects whereas external integration concerns both the purchasing department's interaction with the suppliers as well as the projects' interaction with the suppliers. Supplier relationships can be established through framework agreements transcending the mere buying of products.

The aim of this paper is two-fold. Firstly is development of a theoretical framework to characterise the purchasing organisation and relations to suppliers and to use this on a case of a large contractor. The main dimensions in the characterisation are the four organisational dimensions integration, division of tasks, coordination and decision scope as well as the external relation characterisation. There is a focus on the internal aspects of the purchasing organisation and how the internal organisation may interplay with the external environment such as with the supply chain. Secondly is to analyse the limited adoption of integrated purchasing through identifying and analysing integration barriers. The particular contribution of this paper is to address the current gap in the literature related to interplay between internal and

external integration and to extend the understanding by arguing requisite disintegration as a way forward. The paper is founded on a two-year case study with ethnographical elements of one of Sweden's largest contractors and its initiative of a purchasing transformation which aimed to centralise 50 per cent of the total purchasing volumes.

Contractors purchase material and services for 70-80% of their turnover (Axelsson, 2005). Studies have even shown that up to 90% of a project's budget might stem from purchased material and services (Hinze and Tracey, 1994). Hence, suppliers form a large part of the quality that the contractors deliver (Proverbs and Holt, 2000, Karim et al., 2006) and in order for contractors to increase their competitiveness they need to prioritise the value created by the suppliers and realise the suppliers' part in the delivery. Contractors also tend to invest resources to establish closer and long-term relationships with their customers while they ignore establishing long-term relationships with their suppliers (Josephson et al., 2009); a phenomenon transcending to the literature on contractor-supplier relationships which has gained less attention than the literature on client-contractor relationships (Bygballe et al., 2010). A specific gap within contractor-supplier literature exists regarding studies of longitudinal nature (Bemelmans et al., 2012).

Within the construction industry, contractors are structured as project-based organisations (Hobday, 2000). A construction project involves several relationships between firms. Projects that initiate new relationships between firms increase the uncertainty and the risk. The strong project organisation in construction – with its features of fragmentation – enables the delivery of geographically specific and contextualised products, mostly with influence and specification from a specific client. The organising, supply, purchasing and logistics through the project are thus part of the delivery of a solution for the services to be produced (Vrijhoef and Koskela, 2000). Yet, project organising of purchasing produces cost issues and hampers internal and

external integration as well as learning beyond the single project (Koch and Bendixen, 2005).

The paper is structured in the following way. First the theoretical framework develops based on purchasing organisation literature and is reinforced by organisational design literature where focus is on integration and integration barriers. Then follows a method section and an empirical section based on a two-year participatory case study of a large Swedish contractor where first the internal purchasing organisation is characterised and then the contractor's external relationships. The paper continues with a discussion of which integration barriers that are identified and where in the organisation they emerge followed by a differentiation of four modes for organising purchasing. Lastly, conclusions are drawn arguing for a mediating, requisitely disintegrated purchasing organisation which is based on enhanced collaboration between the purchasing department and the projects.

## 2. Theoretical framework

The theoretical framework departs from the purchasing literature where organisation of purchasing is discussed through the interplay between internal and external integration. The theoretical framework is enforced by organisational design literature and literature on integration barriers derived from the construction industry. Lastly, a summary is presented which explicates the key insights from the theoretical framework.

### 2.1 Organisation of purchasing

A trend within the contractors of the construction industry has been to follow the strategic purchasing approaches originally developed for the manufacturing industry by centralising the purchasing function and organisation and forming framework agreements with suppliers in order to reach enhanced efficiency (Axelsson et al., 2005). The reported results have, however, varied (Koch, 2011). Several authors have discussed how purchasing may be organised. Some examples are discussed here.

One of the extremes concerning purchasing organisation is the centralised mode. In this case a purchasing department is placed centrally in the company by top management and is responsible for purchasing activities such as supplier strategies, supplier selection, negotiation and the signing of long-term agreements (van Weele, 2005). Operational activities such as call-off orders on agreements are done locally but according to the agreements signed centrally. The purchasing tasks and decisions are hence located at the purchasing department. By centralising the purchasing authority to the central functions of the organisation, purchasing volumes can be consolidated, adherence to purchasing plans and strategies is facilitated and purchasing expertise is developed within the purchasing department. Additionally, the duplication of purchasing efforts may be severely reduced (Monczka et al., 2009).

Decentralised purchasing organisation is the other extreme. In this case the purchasing authority is located locally where business units or projects are fully responsible for all purchasing activities (van Weele, 2005). All purchasing decisions and tasks are performed locally and a central purchasing department is therefore not needed. The need for internal vertical integration is thus non-existent. A decentralised purchasing organisation may result in the same company negotiating with the same supplier regarding similar products but may be compensated by the potential benefits of being locally embedded. A decentralised purchasing organisation gains advantages regarding speed

and responsiveness to changed demands and conditions, an understanding of the operational requirements, but may also increase the individuals' ownership and personal commitment through this empowerment (Monczka et al., 2009).

Few companies are, however, located at these extremes (Monczka et al., 2009). Combinations of centralised and decentralised purchasing organisations are widespread as practical solutions in industries (Fearon and Leenders, 1995). One model for choosing a preferred purchasing organisation is based on corporate coherence and purchasing maturity and is presented by Rozemeijer and Wynstra (2005) drawing on the work by Rozemeijer (2000). The corporate coherence is related to the extent to which different parts – projects in this paper – of the company are operated and managed as one entity. Purchasing maturity relates to the professionalism in the purchasing function – the purchasing department in this paper – regarding e.g., its role and position, the involvement of top management in strategic purchasing decisions, the quality of the purchasing parties and the level of collaboration with suppliers. Based on the two variables, a five mode taxonomy is presented: Decentralised, when maturity and coherence is low; Federal, when maturity is high and coherence is low; Centred, when maturity and coherence is high; Centralised, when maturity is low and coherence is high; and Coordinated, as an intermediate mode when both maturity and coherence are in the middle. Furthermore, as an organisation's strategy is to be more responsive to individual customers, a more decentralised approach would be likely (Monczka et al., 2009). Tailoring the purchasing organisation to the current business situation is a prerequisite in order to be effective (Rozemeijer and Wynstra, 2005).

In a study, Koch (2011) finds centralised, decentralised and mixed modes when investigating contractors' purchasing organisations. Both the centralised and the decentralised is found to be dysfunctional (see also Karjalainen, 2009). One specific case study exhibits integration between centralised and decentralised elements enabled by committees of project members collaborating directly with strategic purchasers. This appears to have enabled a high degree of loyalty to the suppliers with a framework agreement and Koch (2011) finds exemplary triads of projects, suppliers and central purchasing where specific collaboration can be realised in a similar way as intended in the coordinated mode presented by (Rozemeijer and Wynstra, 2005).

Two extremes of purchasing organisation – centralised and decentralised – have been identified together with possible intermediate modes. To further inform these modes of organisation of purchasing, the internal perspectives are further elaborated through the concepts of internal integration, decision scope, coordination and division of tasks. Afterwards, external integration is covered to inform the external perspectives.

### 2.2 Internal integration and organisational perspectives

Integration can be defined as “the collaboration required achieving unity of effort” (Lawrence and Lorsch, 1967 in Hatch and Cunliffe, 2006:112). Further Monczka et al. (2009:114) views integration as “the process of incorporating or bringing together different groups, functions or organisations, either formally or informally, physically or by information technology, to work jointly and often concurrently on a common business-related assignment or purpose”. Lawrence and Lorsch (1967) found that high performance organisations had the appropriate

degree of differentiation for their environment and used forms of coordination consistent with the coordination demands of their differentiated activities. Whereas Lawrence and Lorsch (1967) argue that the organisational design is an outcome of the environment and inherent culture and structures, this paper views the decision of how to organise purchasing as a result of strategic choices by the involved actors (Pettigrew, 1985).

Classical organisational design literature would organise tasks horizontally in specialised units, integrating similar tasks and differentiating tasks into units in order to obtain expertise and efficiency (Cummins and Worley, 2005). In other words, organisation should strive for the right balance between integration and differentiation. The units, carrying out the tasks necessary for production of products and services, would then be controlled and coordinated by assigned management with an appropriate decision scope and using communication channels (Mintzberg, 1993, Ensign, 1998).

Decision scope relates to the actor's possibility to decide when performing a specific function in the purchasing organisation. Decisions cover choice of work method, choice of product to make, choice of tools (Schumann et al., 1994), and the scope can be characterised by the degree to which the actor can do so. Coordination between different tasks has been defined as including the following mechanisms: mutual adjustment, direct supervision standardisation of work processes, standardisation of outputs, skills and norms (Mintzberg, 1993). At present the construction industry struggles with how to coordinate between projects as the projects need a certain autonomy but also need to act as part of a company. A classic tool to increase coordination is to establish hierarchy. Division of tasks or division of labour relates to division of jobs and tasks into groups and subgroups and how these are divided between organisational actors (Galbraith, 1977). Purchasing in construction can actually be understood as just such a division of tasks (Vrijhoef and Koskela, 2000).

The organisational concepts of integration, decision scope, coordination and division of tasks can be used to develop a typology as reference for the internal part of analysis of purchasing organisation.

### ***2.3 External integration and its interplay with internal integration***

By approaching suppliers through external integration, i.e. supplier development, just-in-time purchasing and supplier partnering, it has been argued that positive effects on performance are realised (Van Der Vaart and Van Donk, 2008, Droge et al., 2012). The success of external integration is, however, associated with good knowledge of the supplier, properly aligned roles, and characteristics of the buyer-supplier relationship which "may not be achievable within one single project but may require a longer term commitment both from the contractor and the supplier" (Martinsuo and Ahola, 2010, p. 109).

The ways of effectuating inter-organisational interactions between buyers and suppliers are, however, multi-faceted. Characteristics of the interactions range from arm's-length, transactional relationships where two parties are carrying out a transaction isolated in time to obligational, collaborative relationships which span an extended time period reaching beyond the specific transaction (Anderson and Narus, 1991, Sako, 1992). The degree of collaboration is also founded in how close the involved parties need to work together in order to achieve their individual goals (Cox, 2001). Additionally,

relationships with suppliers have been characterised by a degree of adversarialism, explaining the amount of conflict that will occur over value appropriation (Cox, 2001).

External as well as internal integration has been argued as a recipe towards purchasing success within the purchasing literature (Rozeemijer, 2000, Cousins and Spekman, 2003, Holmen and Pedersen, 2010). Some purchasing authors claim that the interplay between internal organisational activity structures or functions in purchasing and the external organising with suppliers becomes increasingly important (Gadde et al., 2010). Internal integration has also been viewed as a precursor to external integration (Hillebrand and Biemans, 2003, Zhao et al., 2011), proposing the importance of the organisation's willingness to integrate with the supply chain in order to successfully achieve external integration (Zhao et al., 2011). The argument, however, fails to point out which functions of the organisation are implied. Moreover, reasoning like this has an underpinning assumption that the different functions within the organisation act in a similar manner, which in this paper has been shown not to be the case. Third, it is an organisational view overemphasising mechanical links in the organisation and underestimating the importance of the actors' interaction. Full integration is, however, not a universal solution in all contexts (Gadde and Snehota, 2000, Benton and McHenry, 2010).

### ***2.4 Barriers to internal and external integration***

Developing a new purchasing organisation, doing purchasing organising development is here viewed as carrying out organisational change, with an external and internal element. In principle, barriers to change can originate from a range of factors in an organisation, but one frequently pointed at is resistance to change by employees, related to their perception of the impact of the change (Kotter, 1996). Dent and Goldberg (1999) on the other hand would insist in avoiding stereotyping both parties, management and employees.

The notion of perceived barrier is therefore borrowed with some caution from an interpretivist change management context (Kotter, 1996). An actor's perception of a barrier derives from experience with barriers, gut feeling and exchange of opinions with colleagues and other actors or even derived from the organisational culture. That barriers exist is here accompanied by a contention that that they can be overcome by mobilising resources and motivation.

In their discussion of perceived barriers to change in construction processes, Vennström and Eriksson (2010) distinguish between attitudinal, industrial and institutional barriers to change in construction. Attitudinal barriers are understood as adversarial attitudes, lack of ethics and morality, focus on projects instead of processes and a short-term focus. Industrial barriers are understood as traditional organisation of the construction process, conservative industry culture, industry structure and traditional production processes whereas institutional barriers is defined as standard contracts, laws and traditional procurement procedures (Vennström and Eriksson, 2010). Their analysis focuses on the client's perceived barriers and they find that attitudinal and industrial barriers are important whereas the institutional are not. They further emphasise the role of closeness between client and contractor as important in the perception of attitudinal barriers. However, Vennström and Eriksson (2010) used questionnaires to investigate the issue which locked them in to specific and perceived barriers - something they fully acknowledge.

There are also several barriers and constraints in play that

undermine the establishment and maintenance of contractor-supplier relations in construction (Akintoye et al., 2000, Dainty et al., 2001). Dainty et al. (2001) argue that “the key barriers to greater integration seem to stem from the historical fragmentation of project delivery systems and the contractual and adversarial nature of construction project relationships”. They categorised barriers to subcontractor integration into the supply chain and suggested changes required to alleviate each barrier. They mention financial/cost-related issues, such as competitive tendering, programming/time-related issues, such as main contractors not ready for their input during construction, quality of information and related issues, such as insufficient information given to subcontractors, and attitude-related issues, such as main contractors focusing on completing projects in time rather than integrating suppliers. Also, forming long-term partnerships with a particular main contractor, sub-contractors may lose work with others as a consequence (Dainty et al., 2001).

When following the categorisation by Vennström and Eriksson (2010), barriers which have been mentioned in the literature which relate to attitudinal issues are aggressive business mentality (Akintoye et al., 2000), low trust economy (Green et al., 2005), unique projects that require unique configurations of internal and external capabilities (Martinsuo and Ahola, 2010), higher interest in client relationships than in supplier relationships (e.g. Akintoye et al., 2000, Josephson et al., 2009). Barriers which relate to industrial issues are conflicting nature of demand and supply (Cox and Ireland, 2002), high degree of uncertainty and technical novelty (Martinsuo and Ahola, 2010), fragmented sector with many specialist firms (Dainty et al., 2001) and niche markets (Green et al., 2005), complicated structures of power in the materials, task, equipment and professional services marketplaces (Cox and Ireland, 2002). Most of both the attitudinal and the industrial barrier tend to be external in their character. Another reason for the hesitant approach towards integration from the project might be the difficulty for practitioners of identifying the benefits of integration and collaboration (Dainty et al., 2001).

While authors have commented on barriers to external integration of sub-contractors and material suppliers long-term, few have discussed the internal integration of the central purchasing organisation and the local project purchasing. This ought to be an interesting avenue since there is “a significant conflict between organisational strategy and its implementation at a project level” (Dainty et al., 2001). Furthermore, the difficulty for practitioners to identify the benefits of integration has been neglected by the contractor-supplier literature which rather assumes the approach is beneficial (Bemelmans et al., 2012).

This discussion on barriers to integration has revealed a very open field of possible areas where these might occur and what they might relate to. Some tendencies might, however, be elucidated. The two major fields in which barriers to integration could emerge seem to be within attitudinal and industrial matters (Dainty et al., 2001, Vennström and Eriksson, 2010). These fields have also been argued to have a larger impact as barriers than institutional barriers (Vennström and Eriksson, 2010). Due to the open field of possible barriers, we have chosen to look systematically at the internal and external purchasing organisation of the case organisation. Hence, the individuals within the purchasing organisations’ perception have guided the empirical data, rather than conceptually closing the types of possible barriers.

## 2.5 Summarising the theoretical framework

Based on the theoretical framework, two extremes of a continuum of purchasing organisations are identified, the centralised and the decentralised purchasing organisation. Additionally, an intermediate mode, hybrid purchasing organisation is glimpsed in between. Whether this hybrid mode is one or many varieties is, however, still a subject for further investigation. In the view of this paper, designing of the purchasing organisation is based in the concepts of division of tasks, decision scope and coordination. Overarching these concepts and considered the most important activity is integration, both internally and externally. In this specific context, internal integration concerns the relationship between the purchasing department and the projects whereas the external integration concerns both the purchasing department’s interactions with the suppliers as well as the projects’ interactions with the suppliers.

Barriers to integration can, however, stem from a range of factors and emerge both from internal and external integration, advising us to use an open empirical approach. Yet, attitudinal and industrial matters seem to comprise more apparent barriers than, for instance, institutional matters. Departing from the introduced internal and external concepts, analysis of integration barriers within a case organisation will further help untangle organisation of purchasing.

## 3. Method

The paper is based on a qualitative case study which has encompassed an in-depth investigation of purchasing within a contractor organisation in a real-life context. When initiating the study on which this paper is based, the case study organisation was going through a purchasing transformation and was about to start a development project focusing on supplier development. During discussions with Chalmers University of Technology, an industrial PhD project was initiated as part of the supplier development project. Due to this set-up, in-depth access was facilitated to a large Swedish contractor in the forefront regarding purchasing.

Over two years, the first author was employed within the purchasing department of the contractor. Participatory observations together with individual interviews constitute the primary method of data collection, which is summarised in Table 1. The participative observations lasted for a period of two years where the first author’s role as an observer was subordinated to the role of participant and hence, could be termed participant-as-observer (Gold, 1958, Merriam, 2009). The observations contributed to an increased insight into the case organisation. For example, people at the purchasing department have mentioned difficulties with the on-going purchasing transformation; this was, however, a subject that was mostly discussed around the coffee machine rather than in formal venues.

As the first author was part of the everyday work at the purchasing department, there were many opportunities to discuss questions and findings with people from the case organisation. A primary source of information has been informal conversations which have occurred many times every day during the two years. The informal conversations have mainly been with the personnel at the central purchasing department located at the Gothenburg office. Category managers, sourcing specialists, content specialists, purchasing group managers, purchasing managers and the purchasing director have been recurrent counterparts in

these conversations which have occurred during work, during coffee breaks, during travels and during after-work activities. Three individuals within the purchasing department have featured as key informants. These individuals have described their work and their challenges in detail on at least a monthly basis.

In addition to the informal conversations, daily operative meetings and workshops have contributed to an enforced understanding of the organisation and its challenges. Mainly two types of formal meeting have been attended. The first type related to the group where the first author was formally employed, concerning implementation and development of suppliers and the group's support to the category managers. The second type concerned the development of tools and methods for supplier development related to the project which the first author was working within. Even though the topics of all these meetings have not been the research project as such, the insights from the meetings have given an opportunity to continuously revise and reconsider the findings based on discussions with the people in the case organisation. Because the participants have interacted during these gatherings, valuable insights have been added to the data.

In addition to the observations, a total of 37 in-depth interviews were conducted. Of these interviews, 25 focused on one specific contractor-supplier relationship, where 10 respondents belonged to the project management of the contractor and 15 respondents to the supplier organisation, (for further analysis see Frödell and Josephson, 2008) and 12 of the respondents were strategic purchasers working at the purchasing department (for further analysis see Frödell, 2011). The interviews were based on open-ended questions, lasted from 45 to 90 minutes and were mainly conducted at the respondent's office or in an adjacent room.

Written documentation also contributed to the findings of the study. These documents mainly provided background information but provided information unbiased by personnel and respondents' personal opinions and perceptions. Annual reports, purchasing statistics from the case organisation, framework agreements, role descriptions and excerpts from the quality systems describing preferred ways of working are examples of documents used. Also proposals and decisions regarding the

purchasing transformation helped in developing a grounded understanding of the management framing.

The iterative analysis in this study has been conducted through matching of the empirical data and the theoretical framework (Dubois and Gadde, 2002). Integration barriers and in particular perceived barriers have been extracted and formulated and also re-directed the study through a need to extend the collected data and provided possibilities for further analysis. The production of knowledge behind this article has thus occurred in an abductive manner where empirical fieldwork and analytical work have interacted with the simultaneous evolving of the theoretical framework (Dubois and Gadde, 2002). The iterative analysis has been performed by the first and second author in a manner that the first author has re-told on a recurrent basis during the two year case study and summarised the insights and findings from the collected data. While some of the perceived barriers have been based on the overall impressions and observations, some of them have also been extracted from documents.

Based on the data from the case organisation, categories and themes of integration barriers have emerged and been matched to theoretical concepts and the theoretical framework through analysis, comparison and mapping (Dubois and Gadde, 2002). As part of the analysis, preliminary findings and categorisations have been presented and discussed with key informants during an audio-recorded three hour workshop. In addition to a restructuring of the perceived barriers, the workshop added further details into the areas which the perceived barriers relate to. By discussing the integration barriers between the authors, a final categorisation was formed.

Due to the participatory nature of the study, a reflexive and critical stance has been maintained during the study in order to mitigate bias. There may, however, be implications of this type of participatory study due to the researcher going native in the case organisation. Since this study reports on the perceptions of the individuals within the case organisation, this would, however, be considered a strength rather than a drawback due to the in-depth access to both organisation and personnel. To further mitigate bias, the first author distanced himself from the case organisation during the latter part of the analysis and the writing of this paper. The findings and results have also been

**Table 1. Summary of data collection**

Type of method	Details
<b>Observations</b>	2 years participatory observations within central purchasing department, 2007-2009
<b>Informal conversations</b>	Several informal conversations daily with category managers, sourcing specialists, content specialists, purchasing group managers, purchasing managers and the purchasing director Three individuals featured as key informants
<b>Formal meetings</b>	Meetings as part of the everyday work within supply management specialists group Meetings as part of the everyday work within the supplier development project Annual two-day seminars with central purchasing department
<b>Interviews</b>	37 interviews; 45-90 minutes per interview
	Contractor: 8 category managers; 4 purchasing group managers; 8 site managers; 2 foremen Supplier: 7 business managers; 4 sales representatives; 2 key account managers; 2 service and logistic staff
<b>Other group activities</b>	Feedback seminars with internal reference group Feedback seminars with external reference group
<b>Other data sources</b>	Annual reports, purchasing statistics for the internal database, framework agreements, decision of the purchasing transformation, website

continuously discussed with fellow researchers and between the authors in order to maintain a critical distance from the studied organisation. The aim of this paper is, however, not to give an exhaustive coverage of barriers related to the establishment and maintenance of contractor-supplier relationships, but to report topics which were frequently mentioned and discussed within the case organisation.

#### 4. Case

The case description below presents the purchasing organisation in an internal and external perspective. Each perspective then develops the role of barriers for more integrated purchasing. The barriers are based mostly on the perception of the strategic purchasers within the purchasing department. While the actors visible in the analysis are the purchasing department, supplier representatives and project representatives, the perceived barriers mainly circulate around the interrelations between these actors but also transcend to top management. Below, the description of the purchasing organisation follow a top down view beginning with top management, followed by the purchasing department and the project organisation.

##### 4.1 *The contractor's internal purchasing organisation*

The case company is one of Sweden's largest contractors and part of an international group. With a turnover of 23.2 BSEK and 9,400 employees during 2010, the company is active in civil engineering and building and is involved in thousands of projects each year located all over Sweden.

The vision of the top management is to become a role model in Swedish industry while the business concept states that the organisation develops, builds and maintains the physical environment for living, travelling and working. Following a top management decision, purchasing became an explicit part of the corporate strategy in 2005. A proposal initiated by two vice presidents and developed by the appointed purchasing management became the basis for a new organisation of purchasing – the purchasing transformation – and was decided in the top management of the contractor later the same year. The former purchasing department got increased attention as a national organisational unit where the vice president of purchasing became part of the top management team.

Historically, purchasing has been a decentralised activity with the full responsibility given to each project. In an internal survey, almost 25 per cent of the employees specified that purchasing was part of their work. Each individual working with purchasing within the projects depended on their own network of suppliers, using the one they found most attractive or suitable. As a result, purchasing within the case organisation was very fragmented, not only in terms of the many different suppliers used, but also in terms of those suppliers treating buyers from each individual project separately. In turn, many suppliers have been missing the picture of the company as one customer.

The purchasing transformation had the ambition to centralise the purchasing function and make purchasing a specialised strategic function instead of an operational project-based activity. The transformation aimed at centralising 50 per cent of the purchasing volumes through global and national framework agreements whilst still keeping 50 per cent within the projects. A task force consisting of the purchasing management and representatives from top management decided what to centralise

and what to keep decentralised. In addition to consolidating volumes and renegotiating prices from suppliers, the initiative included development projects concerning logistics, separation of material and services when procuring subcontractors and later also supplier development. Also, e-procurement systems were being implemented and standardisations of some of the framework agreement suppliers' available product range were being made within these systems. The initiative was executed to fully utilise the potential benefits that the company could gain from being one of Sweden's major internationally active companies and thereby reduce the purchasing costs.

As part of the purchasing transformation, the purchasing department grew from 30 to approximately 120 employees during the years 2006-2008. In order to ensure high quality knowledge in purchasing, many of the newly recruited were formerly purchasing experts at major companies in other industries such as pharmaceuticals and automotive. The external recruitment was argued as a stepping stone to surmount the lack of strategic purchasing knowledge within the construction industry as well as to bring established purchasing tools and methods for supplier management to the company through the experienced employees. While being a national unit, most of the people employed within the central purchasing departments were geographically located in either Stockholm or Gothenburg.

The purchasing department is centred on category managers who are responsible for framework agreements with suppliers. The category managers are responsible for sourcing and management of the supplier base in one or more purchasing categories. The category managers themselves do no actual buying, but represent the suppliers' formal contacts with the central purchasing department. A handful of category managers related to either material or services categories constitute a purchasing group, which is managed by a purchasing group manager. A total of 12 purchasing groups exist in the purchasing department covering, for instance, civil engineering materials, framework supplemental material and indirect materials and services. The purchasing group manager coordinates the group and is responsible for fulfilment of its goals and objectives, as well as being responsible as category manager for one or two categories. In addition, three functions in the purchasing department act as specialists supporting the category managers with sourcing, e-procurement systems and providing advice on international matters. Also, the development project concerning logistics acted as support to the category managers when sorting the logistic matters related to the framework agreement suppliers.

Since Sweden is a long country with a long distance from north to south and the contractor does business in a variety of sub-industries, the contractor exhibits a geographically divided organisation into several regions and further into several districts. Derived from the regions or the districts, project organisations are formed to perform a specific project. The operative purchasing is executed by each specific project. The projects vary both in characteristics covering civil engineering, residential and non-residential buildings, but there is also a wide variety in size. Of the 2000 projects over 1 MSEK executed in a specific year, 24 projects over 100 MSEK were executed covering 30 per cent of the project portfolio. Additionally, 102 projects between 99 and 25 MSEK covered 26 per cent, 254 projects between 24 and 10 MSEK covered 21 per cent and 1,187 projects between 1 and 10 MSEK covered 23 per cent of the project portfolio. Based on the size of the project, the project organisation is formed.

The project management is centred on a site manager.

The site manager is supported by foremen who have the operational responsibility of subcontractors and employees. The financial responsibility for the project is placed on the site manager, including the financial responsibility for purchasing. A project engineer may support the site manager in areas such as purchasing. A regional or district purchaser might also be involved during high volume purchases. The site manager reports to a project manager who in turn reports to the district, or to the region depending on size of the project, and within which region the project is situated. In smaller projects, however, the project management might be constituted of one individual who covers all responsibilities, whereas in larger projects several site managers might share the responsibility of the project divided into sections or type of work.

An inherent part of the organisational structure is the local decision-making and the project-oriented focus on profit. Even though the purchasing department signs framework agreements with suppliers, the projects make the decision of what suppliers to use. A strategic purchaser emphasised the subordinate status of the framework agreement and the power of the order itself by stating that “The framework agreements may be good for our suppliers but in the end it is the actual order that matters. A non-binding agreement is more a case of nice to have.” An observed effect of this is that the framework agreements are mainly being used when considered the most favourable from a project perspective compared to the spot market. From a supplier perspective, this fosters a need to market their products twice, once to the purchasing organisation for the signing of the agreement and once to the projects for the actual order. The supplier thus builds relations with both the purchasing department and the projects.

Additionally, observations were made through the organisation that suppliers differentiate their pricing for the projects. A strategic purchaser pointed out that “there are sub-contractors that offer a certain price if a specific site manager is responsible for the project”, and argued that the reason for this was that the suppliers know that it will be a better functioning process. The reason was the wide variety of ways of working within the projects.

Following the initial focus of the purchasing organisation which was signing agreements with suppliers and lowering prices, awareness starts to take form that this is only one part of the equation for lowered purchasing costs. Equally important is the usage of the agreements, the agreement compliance. Consequently, the main focus turns towards marketing the benefits of the agreements to the projects in order for them to utilise the signed framework agreements. The purchasing department, hence, takes an additional role as a marketing department where all strategic purchasers are offered training within marketing and also processes and templates for marketing material were developed; a change of focus unforeseen by most of the strategic purchasers. Due to this shift towards a dual focus on purchasing and marketing, the subordinate status of the framework agreements became even more apparent.

Despite the contractor's initiatives on standardised ordering for the projects such as e-procurement solutions, the ways of working within the projects varies and relates both to the variety in tasks and to the specific site manager; less to the company structures or management, which the site manager is a part of. Hence, when the supplier is approaching the projects there are different ways in how the projects think the ordering and delivery should be conducted, making the situation for the supplier very difficult, e.g. regarding times for delivery and routines for

receiving the goods or services but also regarding planning and effectuation of subcontracting. A reason for maintaining the personalised ways of working may be related to the project-oriented focus on profit.

In addition to the short-term, project-based incentive systems within the projects, the purchasing department's incentives also follow a short-term strategy. After an event where the purchasing department was gathered and several strategic purchasers were being awarded by the purchasing management and honoured for new framework agreements with high price reductions, one of the strategic purchasers argued – off the record – that he could have signed a better deal with the suppliers. Since the evaluations of the purchasers and the incentive structures were based on reducing prices each year, however, the strategic purchaser chose to sign a one-year agreement in order to be able to reduce prices again next year. The internal performance measurements and incentives systems, consequently, drive the organisation's members to take a short-term perspective when it comes to supplier relations on behalf of long-term perspectives. That the measures and incentives systems encourage decreased prices each year could be seen as reflecting the concurrent economic crisis but also as an indicator of the contractor's short-term orientation. The incentives systems indicate what the management sees as important and which criteria they wish to aim towards.

#### *4.2 The contractor's external relationships*

Regarding the contractor's external relationships, a total amount of 28,000 suppliers were used by the contractor's organisation during 2007 with varying spend. Purchased material and services represented 71,5 percent of the turnover. 90 per cent of the total spend is concentrated on 10.3 per cent of the suppliers and 50 per cent of the total spend is concentrated on 0.8 per cent of the suppliers, which equals 227 suppliers. Furthermore, 17,500 of the suppliers have invoiced the case organisation five or fewer times, of which 9,000 only sent one invoice. Of the total purchased volume, 30 per cent were carried out through the approximately 600 suppliers who had signed a framework agreement with the case company. Even though the top management's aim concerning these framework agreements is that they should be used one hundred per cent by the projects, their use is not compulsory.

When further looking at the case organisation's fifteen largest suppliers, framework and non-framework agreed suppliers, it becomes evident that the majority of these suppliers deliver less than ten per cent of their turnover to the contractor, as shown in Table 2. The table presents the case organisation's purchasing from a specific supplier as part of the suppliers' turnover. If the supplying organisation is international, the numbers show the turnover of the Swedish subsidiary. The table also shows the suppliers' respective share of the case organisation's total purchasing. With this relatively small impact on the suppliers it could be questioned whether the suppliers are interested in further integration with the specific contractor. A customer could, however, be important for the supplier even though their financial impact might be minor.

The case company is a national-based subsidiary of a global company, doing business in all regions within Sweden. There are, however, few suppliers that are active within similar range of markets. The vast majority of suppliers are local, especially service suppliers – subcontractors. Within HVAC installation, for instance, which is one of the major subsectors there are

approximately 3000 firms are registered in Sweden. Only three of them operate nationally. A few other firms operate in several, but not all, regions. All other firms operate locally. This situation is similar in most subsectors.

If the criterion for choosing suppliers was based on the fact that they do business on the same geographical markets as the contractor, only a very few firms in every subsector would be qualified. Such a limited number would reduce the possibilities for finding the supplier that is most suitable for further integration. When it comes to specialist contractors, for instance HVAC installation firms, it should be noted that they are decentralised in a similar way as large contractors.

On a national level, the construction industry is also characterised by major market changes over time. The changes on a regional level are even greater. When looking at the effects of the great market changes, neither the contractor nor its suppliers seem to be interested in prioritising a single supplier or contractor. A strategic purchaser mentioned how the contractor, in times of prosperity, had to buy a certain product from all suppliers active in the Gothenburg region. In contrast, when the market fell in 2008/2009, the top management gave strong recommendations to the suppliers to reduce prices in order to maintain their framework agreements. Furthermore, during the recession, project managers themselves negotiated with suppliers that the contractor already had existing framework agreements with in order to get lower prices than those already accepted by both parts.

Furthermore, several examples during the study illustrate the strategic purchasers' diminished influence on what is to be bought. Since the possible range of alterations in the products is narrowed down by prerequisites and prescriptions on what is actually needed for a satisfactory functionality, the bargaining power decreases. The client prescribes specific material produced by a specific supplier and according to the supplier's product range. A strategic purchaser stated that "We need a functional specification instead of just a brand and a model", and emphasised that many alternatives to the well-known and sometimes preferred brand might be as good and might also come at a lower cost.

Instead, as an effect of the client's prescriptions, the contractor has to purchase from the suppliers' ordinary product range rather than specifying for the supplier what is actually needed. This issue affects the possibilities of recurrent usage of specific suppliers since it restricts possibilities for the contractor to choose the supplier. "This could be changed if we want to", one strategic purchaser stated, and primarily addressed the projects which are developed in-house by the internal client organisation. Apparently, even within the internal organisation, the situation is perceived and the decisions on products and suppliers are thus shifted towards the client organisation from the purchasing department.

## 5. Analysis and discussion

Based on the theoretical framework and the findings of the case study, the discussion aims to analyse the limited adoption of integrated purchasing by focusing on barriers hindering internal and external integration. Lastly, based on the characteristics of the purchasing organisation and relations to suppliers, requisite disintegration of purchasing through a mediating purchasing organisation is discussed as a means to overcome the perceived barriers to integration.

### 5.1 Which integration barriers are identified and where do they emerge?

The characteristics of the contractor's purchasing organisation are complex. Drawing on the case study, six perceived barriers may be identified; two which are drawn from the contractor's internal organisation, two which are derived from the external relationships and two which are derived from the interplay between the internal and external organisation. The internal perceived barriers to integration are (1) the framework agreements subordinate status compared to the purchasing orders and (2) the short-term incentive systems for the strategic purchasers within the central purchasing function. The two perceived barriers that are a mixture of internal and external barriers are (3) the inconsistent ways of working within the projects and the related

**Table 2. The case organisation's 15 largest suppliers**

Supplier	Purchasing volume as share of supplier's turnover	Supplier's share of contractor's total purchases
Internal wholesaler	99%	2.4%
Internal service supplier	84%	2.3%
Material supplier	49%	1.3%
Internal service supplier	4%	1.2%
Material supplier	1%	1.2%
Wholesaler	3%	1.1%
Material supplier	9%	0.8%
Service supplier	5%	0.8%
Wholesaler	4%	0.8%
Internal service supplier	38%	0.8%
Material supplier	20%	0.7%
Internal service supplier	45%	0.7%
Service supplier	2%	0.7%
Material supplier	6%	0.7%
Wholesaler	1%	0.6%

difficulties for suppliers to develop their ways of working and (4) the central purchasing department's diminished influence on the procured products derived from clients' demands. The external perceived barriers to integration relate to (5) the interpretation of the geographical conditions where the contractor is a national actor, but many of the suppliers act on a local market and (6) the interpretation of the market changes over time, which affects the contractor's consistency towards the suppliers.

Barriers to integration, both externally and internally, might reflect on the organisation regarding attitudinal and industrial matters, but also institutional (Dainty et al., 2001, Vennström and Eriksson, 2010). Barriers 1, 2, 3 and 6 relate to the attitudes of the involved actors. That framework agreements receive a subordinate status compared to purchasing orders stems from the project focus within the contractor's organisation and the short-term project focus. Likewise, the inconsistency in the ways of working within the projects, as well as the contractor's behaviour in exploiting the market changes by forcing suppliers to reduce prices, both relate to the adversarial attitudes. Hence, the internal barriers to integrations both relate to attitudes as do one of each of the external and the mixed barriers. Barriers 4 and 5, on the other hand, relate to industrial matters. While the purchasing department's diminishing influence on the procured products reflects the traditional production process where a large part of the decisions related to the product specifications is already prescribed, the geographical conditions reflect the traditional production processes where the majority of the man hours are subcontracted. Industrial barriers are thus, related to one of each of the external and mixed barriers. Consequently, the barriers to integration identified in the case organisation mainly relate to perceived attitudinal and industrial matters. The findings further reinforce the conclusions by Vennström and Eriksson (2010) that institutional barriers play a minor role as barriers to integration. The absence of institutional barriers may further be due to the case organisation being a privately owned company and, hence, not acting under the regulations of public procurement.

When further analysing the six perceived barriers to integration, six interactions have been identified in which they emerge, as illustrated in Figure 1. The perceived barriers to integration serve as a foundation for understanding the actual and perceived internal distance between purchasing and projects and the inherent implications. Barriers such as incentive rewarding of strategic

purchasers are based on how much framework agreement prices are lowered each year, while site managers are rewarded based on the financial result in the specific project; a conflict between short-term and long-term intentions towards suppliers. Since different approaches and strategies towards suppliers are used by purchasing and the projects, difficulties in acting externally in an integrated manner become prevalent. A perceived barrier such as the subordinate status of the agreements compared to orders not only relates to the relationships between the purchasing department and the supplier, and between the projects and the supplier, it is also derived from the relationship between the top management and the purchasing department and the projects, respectively.

Moreover, the inconsistent but appropriated ways of working across the organisation's projects challenge the external integration and its possible benefits since suppliers need to adapt their processes to a vast number of projects. In the same vein, the geographical and market fluctuation issues trigger further adaptation. Additionally, it can be mentioned that the perceived uneven distribution of power between the contractor and its largest suppliers occurs to the benefit of the large suppliers. The contractor only constitutes a very small part of their total revenues, making it questionable whether the suppliers are interested in making the large efforts required to achieve external integration through tightened contractor-supplier relations.

Based on where the six perceived integration barriers emerge within the purchasing organisation and the organisational functions between which these interactions are active, a foundation for a theoretical framework might be built. Since these organisational functions play an important role in the existence and non-existence of these barriers, they are all to be included in an analysis of the purchasing organisation. Following the argument by Dent and Goldberg (1999) on not stereotyping top management and employees, organisational functions with different specified tasks are clearly separated; as are suppliers with and without framework agreements. The separation between framework and non-framework agreement suppliers is based in the implied division of tasks where the purchasing process of non-framework agreements is to be managed by the projects, whereas framework agreements are implied as being managed by the purchasing department where the projects merely call off orders on existing agreements. The company coherence as

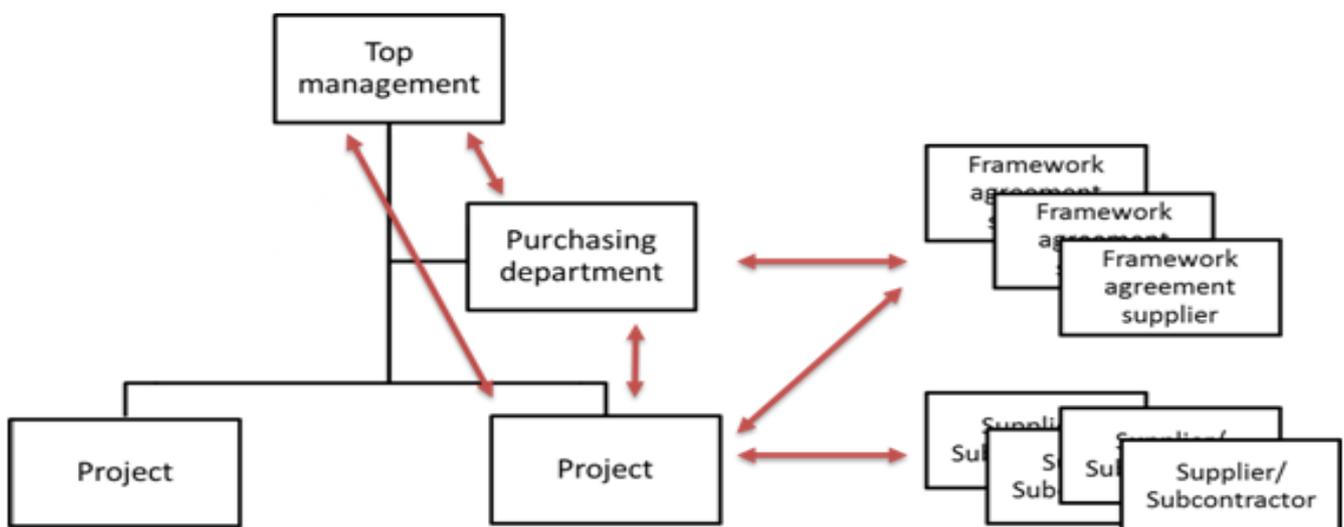


Figure 1. Interactions where barriers to integration are perceived

discussed by Rozemeijer and Wynstra (2005) would in this case relate to the coherence and consistency within and between the projects in terms of project management-related ways of performing tasks.

## 5.2 *Four modes of organising purchasing*

Based in the interactions where integration barriers have been identified and drawing on the introduced organisational concepts, this paper argues the existence of four modes of organising purchasing. These modes are inspired by Fearon and Leenders (1995), Rozemeijer and Wynstra (2005) and Koch (2011), and supplemented by the case study presented in this paper. The four modes are presented in Table 3 and reflect a different emphasis on the five organisational functions: top management, the purchasing department, the projects, the preferred suppliers (those who have framework agreements) and suppliers (without framework agreements). While the centralised and decentralised act as extremes regarding the degree of integration within the purchasing organisation, the intermediate modes characterise two modes where the parallel mode draws towards disintegration and the mediating mode draws towards integration. The parallel mode follows the identified characteristics of the case organisation whereas the mediating mode reflects a possible way forward for the organisation. Rather than striving for full internal and external integration, the mediated model encompasses a certain disintegration as the projects' involvement in purchasing is still important but in collaboration with the central purchasing department; hence, with a requisite level of disintegration.

Within the parallel mode, the findings show that top management is unclear with regards the purchasing department and the projects concerning the decision scope and the division of tasks, such as signing framework agreements and issuing purchasing orders. This creates diffusion between the purchasing department and the projects where the decisions concerning purchasing are to be taken. Through making it legitimate for projects to choose suppliers and issue orders regardless of the framework agreements, the top management itself diminishes the status and the decision power of the agreements as well as the purchasing department. Due to this ambiguity, the coordination between the projects and the purchasing department becomes absent and the framework agreement suppliers risk getting lost in a negative triangle between the central purchasing department,

project purchasers and themselves. The barriers to integration thus drive the suppliers to form bi-dyadic relationships with the contractor organisation where one dyad reaches for the purchasing department, and the other towards the projects.

Aligned with propositions by Hillebrand and Biemans (2003), the study further shows that a lack of internal integration negatively affects the possibilities for external integration with suppliers because it produces behaviours that impede supplier involvement. While successful examples of similar transformations have been reported from other industries and other companies (e.g. Bocconcelli and Håkansson, 2008), the decentralised and project-based organisation of the case company implies integration barriers which impede the transformation of purchasing towards a specialised strategic function. A range of perceived barriers motivate purchasing actors throughout the organisation to follow other paths and logics than the one strived for in the strategic purchasing policy. As internal matters related to attitudes within the organisation acted as barriers for the purchasing transformation, the external integration through long-term supplier relationships and supplier development got hampered; the shift within the purchasing department's focus from purchasing towards marketing the framework agreements to the projects being an illustrative example. Since lack of coordination implies that projects do not support initiated purchasing initiatives, the few willing and committed suppliers are risking a bi-dyadic relationship towards the contractor. A relationship which could have been triadic if the collaboration and integration between the projects and the purchasing department would have been apparent.

Inspired by examples presented in earlier case studies (Koch, 2011), increased coordination between the purchasing department and the projects enables a further integrated mode of purchasing, a mediating mode. Increased internal coordination is shown to facilitate the dispersion of bi-dyadic interactions from suppliers towards the purchasing department and the projects and enables creation of triadic interactions where the localised embeddedness of the projects intertwines with the central purchasing synergies. In this mediating mode, the projects collaborate with the purchasing department and the purchasing department collaborates with the projects regarding framework agreement suppliers. The collaboration is, moreover, founded in systematic support from the top management regarding decision scope and division of tasks, leading to a lower level of ambiguity.

**Table 3. Four modes of contractors' purchasing organisations**

	<b>Centralised</b>	<b>Mediating</b>	<b>Parallel</b>	<b>Decentralised</b>
<b>Top management</b>	Systematic commitment in purchasing and unambiguous decision scope and division of tasks	Systematic commitment in purchasing and less ambiguous decision scope and division of tasks	Vague commitment in purchasing and ambiguity in decision scope and division of tasks	Full delegation (empowerment) of purchasing to projects
<b>Purchasing department</b>	Authorised decision scope and resources	Collaborating with projects	Parallels with projects	Non-existing or peripheral involvement
<b>Projects</b>	Subordinate to purchasing department regarding preferred suppliers	Projects collaborate with purchasing department	Parallels with purchasing department	Authorised decision scope and resources regarding purchasing
<b>Preferred suppliers with framework agreements</b>	Agreement with central purchasing department	Triads active with projects and purchasing departments	Bi-dyads are created to projects and purchasing department	Project preferences
<b>Suppliers</b>	Market relationship with projects	Market relationship with projects	Market relationship with projects	Market relationship with projects

A clearly stated policy assigns the management of non-framework agreements to the projects whereas the framework agreement suppliers are formed in tight internal collaboration.

While the strategic purchasers in the case organisation share an understanding that a more integrated and comprehensive purchasing policy and activity would be an attractive goal, site managers see procurement of suppliers and negotiation of prices as two decisive activities in order to influence the success of the projects. One reason for the hesitant approach towards integration from the projects might be the difficulty to identifying the benefits of integration and collaboration (Dainty et al., 2001). In order to obtain this internal integration a change alliance would need to be built involving mobilisation of resources and motivation for internal integration from the entire organisation (Zhao et al., 2011). Perceived barriers such as the performance measurement and personal incentives would need to be changed through a more comprehensive incentive policy and practice along with a systematic top level engagement. Yet, full integration does not seem to fit the case organisation and its members either internally or externally. It appears to be a more adapted goal to accept some disintegration in the purchasing policy and organisation to balance framework agreements and other purchasing, meet the variety of projects, local conditions and the fluctuating market which are all difficult barriers to overcome.

## 6. Conclusions

The aim of this paper is two-fold, wherein it firstly aims at developing a theoretical framework to characterise the purchasing organisation and relations to suppliers and to use this in the case of a large contractor, and secondly, to analyse the limited adoption of integrated purchasing through identifying and analysing integration barriers.

The purchasing organisation has been characterised through its division of tasks, showing how top level management had a vague commitment resulting in ambiguity within the decision scope as well as tasks for the central purchasing department and the projects. The projects and the purchasing department worked in parallel with little coordination and the central purchasing department experienced a weakened status in framework agreements. The suppliers operated in dyads with the projects and framework suppliers finding themselves in a bi-dyadic position cooperating with both the projects and the central purchasing department.

Six perceived integration barriers were identified as being equally spread over internal, external and a mixture between internal and external. The internal perceived barriers to integration were first the framework agreements' subordinate status compared to the purchasing orders, and second, contradictory incentive systems for the strategic purchasers and projects. The two perceived mixed barriers were the inconsistent ways of working within the projects and the related difficulties for suppliers in developing their ways of working, and the central purchasing departments' diminished influence on the procured products derived from clients' demands. The external perceived barriers to integration relate to the interpretation of the geographical conditions where the contractor is a national actor, though many of the suppliers act on a local market, and second, the interpretation of the market changes over time, which affects the contractor's consistency towards the suppliers. The barriers to integration stem from both attitudinal and industrial matters, whilst institutional barriers are not identified.

A supplier base belonging to the contractor and consisting of

over 28,000 suppliers where the characteristics of purchased products range widely and where a found difference in suppliers' presence on local and regional markets in Sweden is apparent, calls for a differentiated approach towards suppliers. Purchasing approaches and relationship management choices would vary for national material suppliers and local subcontractors, both concerning coherence with individual goals and levels of adversarialism. It is hardly instrumental to insist on common national agreements when local players will be more attractive partners in some regions. Full external integration may therefore not be the generic cure when discussing external relations. Accepting the requisite spread of purchasing organisation in different areas of business could even support interpersonal relations amongst suppliers, project management and strategic purchasing.

As important element is that the pattern of perceived barriers will possibly lead to a differentiated pattern of options for establishing triads between project management, strategic purchasers and preferred suppliers. The movement towards an integrated mode of purchasing organisation is argued for instead of the current situation where the purchasing department parallels the projects in regard to external relations. Striving too far towards a centralised, full integration approach would, however, imply a risk of losing local knowledge and embeddedness and does not fit with the argued low corporate coherence and ambiguous purchasing maturity.

Consequently, a mediating, requisitely disintegrated purchasing organisation is argued which is based on enhanced collaboration between purchasing and projects facilitating and promoting triads between purchasing, project and suppliers. A mediating purchasing organisation would develop the existing bi-dyads into triads benefiting from the local contingency of the projects as well as the strategic benefits of the purchasing department. For this to be reality, top management would, however, need to be sincerely committed and unambiguous regarding division of tasks and decision scope in order to foster the organisation's possibilities for further integration.

After the study was finished, the contractor again reorganised its purchasing organisation. The reorganisation implied that the centralised purchasing department responsible for the framework agreements drastically decreased in size. An increased focus was put on supporting the projects with the implementation of the agreements. The move towards requisite disintegration was therefore adopted by the organisation. The effects and results of the reorganisation would make an interesting avenue for further research. Also, the findings of the paper call for further research investigating how integration between purchasing and projects might be facilitated within project-based organisations with a decentralised tradition.

## References

- Akintoye, A., McIntosh, G. & Fitzgerald, E. (2000) A survey of supply chain collaboration and management in the UK construction industry. *European Journal of Purchasing & Supply Management*, 6 (3-4), 159-168.
- Anderson, J. & Narus, J. (1991) Partnering as a Focused Market Strategy. *California Management Review*, 33 (3), 95-113.
- Axelsson, B. (2005) From buying to supply management at Nordic Construction Company (NCC). In: Axelsson, B., Rozemeijer, F. & Wynstra, F. (eds.) *Developing sourcing capabilities: creating strategic change in purchasing and supply management*. Chichester: John Wiley and Sons.

- Axelsson, B., Rozemeijer, F. & Wynstra, F. (eds.) (2005) *Developing sourcing capabilities: creating strategic change in purchasing and supply management*, Chichester: John Wiley and Sons.
- Bemelmans, J., Voordijk, H. & Vos, B. (2012) Supplier-contractor collaboration in the construction industry A taxonomic approach to the literature of the 2000-2009 decade. *Engineering, Construction and Architectural Management*, 19 (4).
- Benton, W. C. & McHenry, L. (2010) *Construction Purchasing and Supply Chain Management*, New York: McGraw-Hill.
- Bocconcelli, R. & Håkansson, H. (2008) External integration as a mean of making changes in a company: The role of purchasing in a major turnaround for Ducati. *The IMP Journal*, 2 (2), 25-37.
- Bygballe, L. E., Jahre, M. & Swärd, A. (2010) Partnering relationships in construction: A literature review. *Journal of Purchasing and Supply Management*, 16 (4), 239-253.
- Cousins, P. D. & Spekman, R. (2003) Strategic supply and the management of inter- and intra-organisational relationships. *Journal of Purchasing and Supply Management*, 9 (1), 19-29.
- Cox, A. (2001) The Power Perspective in Procurement and Supply Management. *Journal of Supply Chain Management*, 37 (2), 4-7.
- Cox, A. & Ireland, P. (2002) Managing construction supply chains: the common sense approach. *Engineering, Construction and Architectural Management*, 9 (5), 409-418.
- Cummings, T. G. & Worley, C. G. (2005) *Organization development and change*, Mason, Ohio: Thomson/South-Western.
- Dainty, A. R. J., Millett, S. J. & Briscoe, G. H. (2001) New perspectives on construction supply chain integration. *Supply Chain Management: An International Journal*, 6 (4), 163 - 173.
- Dent, E. B. & Goldberg, S. G. (1999) Challenging "Resistance to Change". *The Journal of Applied Behavioral Science*, 35 (1), 25-41.
- Droge, C., Vickery, S. K. & Jacobs, M. A. (2012) Does supply chain integration mediate the relationships between product/process strategy and service performance? An empirical study. *International Journal of Production Economics*, 137 (2), 250-262.
- Dubois, A. & Gadde, L.-E. (2002) Systematic combining: an abductive approach to case research. *Journal of Business Research*, 55 (7), 553-560.
- Ensign, P. C. (1998) Interdependence, coordination, and structure in complex organizations: implications for organization design. *Mid-Atlantic Journal of Business*, 34 (1), 5-23.
- Fearon, H. E. & Leenders, M. R. (1995) *Purchasing's Organizational Role and Responsibilities*, Phoenix: Center for Advanced Purchasing Studies.
- Frödell, M. (2011) Criteria for achieving efficient contractor-supplier relations. *Engineering, Construction and Architectural Management*, 18 (4), 381-393.
- Frödell, M. & Josephson, P.-E. (2008) Initiating Supplier Development through Value Stream Analysis: The Case of Skanska Sweden and its Largest Supplier. *Proceedings of CIB W65/55 Commissions: Transformation through Construction*. Dubai, UAE.
- Gadde, L.-E., Håkansson, H. & Persson, G. (2010) *Supply Network Strategies*, Chichester: Wiley.
- Gadde, L.-E. & Snehota, I. (2000) Making the Most of Supplier Relationships. *Industrial Marketing Management*, 29 (4), 305-316.
- Galbraith, J. (1977) *Organization Design*, Reading, MA: Addison-Wesley Publishing Company.
- Gold, R. (1958) Roles in sociological field observations. *Social Forces*, 36 (3), 217-223.
- Green, S. D., Fernie, S. & Weller, S. (2005) Making sense of supply chain management: a comparative study of aerospace and construction. *Construction Management and Economics*, 23 (6), 579 - 593.
- Hatch, M. J. & Cunliffe, A. L. (2006) *Organization theory : modern, symbolic, and postmodern perspectives*, Oxford ; New York: Oxford University Press.
- Hillebrand, B. & Biemans, W. G. (2003) The relationship between internal and external cooperation: literature review and propositions. *Journal of Business Research*, 56 (9), 735-743.
- Hinze, J. & Tracey, A. (1994) The Contractor-Subcontractor Relationship: The Subcontractor's View. *Journal of Construction Engineering and Management*, 120 (2), 274-287.
- Hobday, M. (2000) The project-based organisation: an ideal form for managing complex products and systems? *Research Policy*, 29 (7-8), 871-893.
- Holmen, E. & Pedersen, A.-C. (2010) How do suppliers strategise in relation to a customer's supply network initiative? *Journal of Purchasing and Supply Management*, 16 (4), 264-278.
- Håkansson, H. & Snehota, I. (1995) *Developing Relationships in Business Networks*, London: Routledge.
- Josephson, P.-E., Polesie, P. & Frödell, M. (2009) Understanding resources waste reduction priorities in Swedish construction. *CIB Joint International Symposium 2009: Construction Facing Worldwide Challenges*. Dubrovnik, Croatia.
- Karim, K., Marosszeky, M. & Davis, S. (2006) Managing subcontractor supply chain for quality in construction. *Engineering, Construction and Architectural Management*, 13 (1), 27 - 42.
- Karjalainen, K. (2009) *Challenges of purchasing centralization – empirical evidence from public procurement*, Helsinki School of Economics, Helsinki.
- Koch, C. (2011) *New Industrialisation in Supply - Balancing project configuration and long term stability through partnerships*, Institute for Business and Technology, Aarhus University, Herning.
- Koch, C. & Bendixen, M. (2005) Multiple Perspectives on Organizing: projects between tyranny and perforation. *Building Research and Information*, 33 (6), 536-546.
- Kotter, J. P. (1996) *Leading Change*, Boston: Harvard Business School Press.
- Lawrence, P. R. & Lorsch, J. W. (1967) *Organization and environment: managing differentiation and integration*, Boston, MA: Division of Research, Graduate School of Business Administration, Harvard University.
- Martinsuo, M. & Ahola, T. (2010) Supplier integration in complex delivery projects: Comparison between different buyer-supplier relationships. *International Journal of Project Management*, 28 (2), 107-116.
- Merriam, S. (2009) *Qualitative Research: A Guide to Design and Implementation*, San Francisco: John Wiley and Sons.
- Mintzberg, H. (1993) *Structures in fives: Designing effective organizations*, Englewood Cliffs: Prentice-Hall.
- Monczka, R., Handfield, R., Giunipero, L. & Patterson, J. (2009) *Purchasing and Supply Chain Management*, Mason, USA: South-Western.

- Pettigrew, A. M. (1985) *The Awakening Giant: Continuity and Change in Imperial Chemical Industries*, London: Blackwell.
- Proverbs, D. G. & Holt, G. D. (2000) Reducing construction costs: European best practice supply chain implications. *European Journal of Purchasing & Supply Management*, 6 (3-4), 149-158.
- Rozemeijer, F. (2000) How to manage corporate purchasing synergy in a decentralised company? Towards design rules for managing and organising purchasing synergy in decentralised companies. *European Journal of Purchasing & Supply Management*, 6 (1), 5-12.
- Rozemeijer, F. & Wynstra, F. (2005) Organizing for strategic sourcing. In: Axelsson, B., Rozemeijer, F. & Wynstra, F. (eds.) *Developing sourcing capabilities: creating strategic change in purchasing and supply management*. Chichester: John Wiley and Sons.
- Sako, M. (1992) *Prices, quality and trust: Inter-firm relations in Britain and Japan*, Cambridge: Cambridge University Press.
- Schumann, M., Baethge-Kinsky, V., Kuhlmann, M., Kurz, C. & Neumann, U. (1994) *Trendreport Rationalisierung*, Berlin: Edition Sigma.
- Van Der Vaart, T. & Van Donk, D. P. (2008) A critical review of survey-based research in supply chain integration. *International Journal of Production Economics*, 111 (1), 42-55.
- van Weele, A. (2005) *Purchasing & Supply Chain Management: Analysis, Strategy, Planning and Practice*, London: Thomson.
- Vennström, A. & Eriksson, P. E. (2010) Client perceived barriers to change of the construction process. *Construction Innovation: Information, Process, Management*, 10 (2), 126-137.
- Vrijhoef, R. & Koskela, L. (2000) The four roles of supply chain management in construction. *European Journal of Purchasing & Supply Management*, 6 (3-4), 169-178.
- Zhao, X., Huo, B., Selen, W. & Yeung, J. H. Y. (2011) The impact of internal integration and relationship commitment on external integration. *Journal of Operations Management*, 29 (1-2), 17-32.

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