

Choosing an organisational form: the case of collaborative procurement initiatives

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Abstract

This paper deals with different organisational forms of collaborative procurement and provides insight into when to use which form. Different forms from the literature are compared with empirical examples to give an overview of forms, which are then described in terms of strategy, skills and organisation. Whilst acknowledging variations, the paper distinguishes between two main forms: virtual networks and third party organisations. Using empirical data and four theoretical perspectives (transaction cost economics, resource based view, contingency theory, agency theory), the paper reflects on when which form can be used and presents an overall framework to help choose an organisational form.

Key words:

Collaborative procurement, organisational form, theoretical frameworks.

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Introduction

Collaborative procurement is horizontal collaboration between two or more organisations during one or more steps of the purchasing process. According to Jost et al. (2005), there are two main advantages to collaboration. The first is increased effectiveness through learning from each other and a better use of resources. As purchasing is evolving into a more strategic function (Reck and Long, 1988) and demands more strategic skills, collaboration can be a way of accessing these skills or freeing up resources to develop them. The second main advantage is an improved efficiency through reduction of transaction costs and increased economies of scale through bundling purchasing volumes (cf. Leenders and Fearon, 1997; Johnson, 1999).

One issue that can hinder or facilitate effective collaboration concerns the choice of the appropriate organisational form (Rozemeijer, 2000; Nollet and Beaulieu, 2003). Which form is chosen can be either the result of a *'top-down'* policy decision or the result of a *'bottom-up'* evolutionary process. This paper is concerned with creating an *'ideal picture'* of when which form would be appropriate. The paper is exploratory and conceptual, drawing heavily on a variety of theoretical frameworks. As internationally, horizontal collaboration receives a lot of attention in public sector organizations, we focus on the public sector. Collaborative procurement however is a broad concept and we hence believe the relevance of this paper goes beyond the public sector. Practical examples of collaborative procurement initiatives, which we derived from interviews, will be used to inform our theoretical debate. The paper aims to investigate collaborative procurement and provide a framework to assess when to use which form.

This paper is structured as follows. Firstly, we describe the methodology used to describe practical examples of collaborative procurement initiatives. We also discuss the theoretical underpinnings of our framework. Secondly, we look at the different forms of collaboration that exist in practice and theory. Thirdly, we describe different theories and assess when which form of collaboration would be most appropriate. Finally, we draw conclusions and propose further research avenues.

Methodology

The empirical data has been gathered in 33 exploratory interviews with public sector procurement practitioners involved in collaborative procurement in the United Kingdom (UK) healthcare (25x) sector and local government (8x) and desk research using websites, reports and news letters. The interviews were conducted to gain an understanding of different collaborative forms and the difficulties they encountered. Examples from the interviews illustrate our theoretical analyses. Conclusions on when to use which form are not based on these interviews, yet they have enabled us to interpret and use the theories in the context of collaborative procurement.

We conducted a literature review and identified theories that had been drawn on in previous studies of collaborative procurement to explain organizational forms (e.g. Nooteboom, 1996; Arnold, 1997; Kamann et al, 2004; McCue and Prier, 2006; Bakker et al, 2006, Murray et al, 2006). This analysis of previous research led to limiting our focus to transaction cost economics, resource based view of the firm, contingency theory and agency theory.

Some theories were deemed outside our scope. The resource dependency perspective (Pfeffer and Salancik, 1978) is not considered as it is used to explain why organisations collaborate. For example, organisations may gain more purchasing power to secure supply in a scarce supply market, or gain certain skills from other organisations that they do not possess themselves (Kamann et al, 2004). Other theories such as game theory and neo-classical theory focus on strategies for dealing with other organisations (Kamann et al, 2004), or retrospectively explain which form is chosen, not which is most appropriate (Bakker et al, 2006).

Forms of collaboration in procurement

In this section we describe different forms of collaboration. First, we discuss forms found in the literature. Next, we describe forms found in our empirical study. Finally, we map all forms onto a continuum.

Forms of collaborative procurement in the literature

Two distinct structural forms of collaborative procurement can be recognised in the procurement literature: informal, virtual organisations and third party organisations. Virtual networks are member-owned and operate without (many) formal rules. Staff are not employed by the collaborative, nor are they dedicated specifically to the collaboration: collaborative working is often part of their other job at one of the member organisations. Third party organisations are separate organisations that are set up especially to manage and coordinate the collaboration. They have formal rules and staff specifically dedicated to the collaboration (Leenders and Fearon, 1997; Aylesworth, 2003; Nollet and Beaulieu, 2005; Bakker et al., 2006). These extreme types can also be found in evolutionary models of collaborative procurement such as by D’Aunno and Zuckerman (1987), Johnson (1999) and Nollet and Beaulieu (2003). For example, D’Aunno and Zuckerman (1987) speak of “federations” as third party formal separate organisations and “coalitions” as voluntary networks. Also, when in literature more than two forms are mentioned in the literature (McCue and Prier, 2006; Aylesworth, 2007; Schotanus and Telgen, 2007), these two extremes are identifiable amongst the variations. One of the differences between Schotanus and Telgen (200) and Aylesworth (2007) is that the first authors explicitly include temporary project-based collaboration on exceptional projects such as IT infrastructure, telecom, or construction projects. Following previous work (Bakker et al., 2006), we do not treat time as an aspect of form in this article, as it is related to its existence and it would be difficult to take a cut-off point (i.e. how long does an initiative have to exist to keep referring to it as temporary?).

In both extreme forms, some degree of collaboration has to be organised. An organisational form has to be chosen and designed (see Figure 1). The two forms represent either end of a sliding scale, with varieties per form that make up the continuum (cf. Bakker et al., 2006).

<Figure 1 about here>

Forms of collaboration in procurement in our empirical study

In the UK there are many reports that refer to collaboration in procurement, such as in local government (Office of the Deputy Prime Minister/ODPM, 2003, 2004, 2006; Beecham, 2006) and the National Health Service – NHS – (Audit Commission, 1996; 2001; NHS Purchasing and Supply Agency, 2002). Using these reports and our interviews, we find the following forms of collaboration:

- *Professional networks* such as in orthopaedics and prosthetics in the NHS, or “Avon procurement forum” in local government. These are networks of people working in a service area that come together and exchange information and ideas on a certain

health service area or purchasing issue. Membership can be informal or formal and they do not necessarily buy together. Networks around a service area can be large and national and require formal membership, or they can be more local and informal when focussing on specific procurement issues alone.

- *Lead Buying*. Examples in local government are “Central Buying Consortium” or “Kent Buying Consortium”. NHS examples are “Supply Management Confederations” (e.g. “Peninsula Purchasing and Supply Alliance” and “Bristol and Weston NHS Purchasing Consortium”) and “Pharmacy Buying Consortia”. The NHS confederations and local government consortia vary in how formalised they are and to what extent they have dedicated staff (some have a board or overall CEO). Consortia type initiatives do not have dedicated staff and they tend to be run by a host organisation, which can rotate between members. They can share information systems and divide work, yet contract uptake cannot be mandated (cf. Cox et al, 2005). Contract uptake in Pharmacy Buying consortia is high as Pharmacists decide on what to collaborate and use the contract. These consortia are limited to buying non-generics, i.e. patented pharmaceuticals. Generic drugs for which the patent has expired are the responsibility of NHS Purchasing and Supply Agency (NHS PASA).
- *Shared services*. This involves sharing activities and resources beyond purchasing services. An example is “Surrey County Council Shared Services” (CSS) or the “ISIS project” (“Improving Services In Somerset”). The latter however is close to collaborative procurement as an external provider is commissioned in a joint tender to provide the required services for multiple Councils. In procurement, shared services can involve sharing a procurement officer or procurement system, suitable for smaller councils that cannot afford dedicated procurement staff. A strategic procurement manager might be shared if councils only have clerical procurement staff (NPS, 2004; Bergeron, 2006; Murray et al, 2006).
- *Piggy backing*. An example is a city council letting a smaller nearby council use its contract for a specific product category, benefiting from the same terms and conditions (cf. Schotanus and Telgen, 2007). This can also be applied when working across different sectors. In the UK South West a city council offered the police their office supplies and paper contract.
- *Third party advisory*. For example, the “Regional Centres of Excellence”, “OGC Buying Solutions” (OGC = Office of Government Commerce) and “NHS PASA”. Each is a separate body, has dedicated staff, advises on purchasing and facilitates collaboration between organisations. NHS PASA and OGC buying solutions are national bodies and also have national framework contracts, for which uptake can not be mandated.
- *Third party purchasing*. For example “Eastern Shires Purchasing Organisation”, “Yorkshire Purchasing Organisation” in local government. Collaborative Procurement Hubs in the NHS such as “Healthcare Purchasing Consortium” and “Re:source”, These are separate organisations with dedicated staff, a separate board, and dedicated offices in a separate location. They charge a fee to cover costs for exercising purchasing activities for members, often against a promised return on investment. They tend to have rules about commitment. They are also referred to as “joint committees” as representatives of the members tend to sit on the board.

- *Third party outsourcing.* This is the outsourcing of the responsibility of a number of procurement categories to an outside, external provider. A clear example in the NHS is “NHS Supply Chain”, which is run by “DHL” in combination with “Novation”. The third party(s) take over complete responsibility and it becomes a standard outsourcing agreement between a buyer and supplier.

The initiation of collaborative procurement can be treated as setting up a new organisation or sub-organisation, whether it is a third party or a virtual network. Congruency theory (Nadler and Tushman, 1979) and organisation design literature (cf. Mintzberg, 1976) describe the key components that make up organisations. These are: (1) strategy (what is the long term goal for collaboration, why do the organisations collaborate – effectiveness or efficiency?) (2) task (what does the collaborative initiative do, what is its focus?); (3) individuals and skills; (4) organisational structure, formal and informal. If we use these core elements we can describe the different forms in more detail (see table below).

<Table 1 about here>

Forms of collaboration in procurement mapped

All the variations, theoretical and empirical, can be mapped onto a continuum with the two extremes on each end (see Figure 2). In the next sections we discuss when which form of collaboration would be most appropriate.

<Figure 2 about here>

Theoretical frameworks

In this section we briefly discuss each theoretical framework and translate it to collaborative procurement. We then discuss in more detail when which form is most appropriate reasoning from the different theoretical frameworks.

Transaction cost economical perspective

Transaction Cost Economics (TCE) suggests that the best way to organise activities is when total transaction and production costs are lowest (Williamson, 1975, 1985, 1991). TCE assumes two pre-conditions: people behave opportunistically and have bounded rationality. Taking this into account, two extreme ways of organising activities are to use the market mechanism or a hierarchy. The choice depends on the balance between costs involved in organising activities in-house versus using the market to supply certain resources.

Three factors affect transaction costs: uncertainty, asset specificity and frequency of the transaction. Transaction cost reduction is using fewer resources when conducting a transaction. As costs are relative to the objective for which certain activities are undertaken, potential benefits should also be taken into account.

In the context of collaborative procurement, potential benefits are related to reducing the uncertainty experienced by each individual organization (Beverland, 2001). Volumes

may be bundled leading to a reduction of resource-use per volume and lower purchase prices. Transaction costs can be high in collaborative procurement initiatives (Hennart, 1991; Williamson, 1991). Specifically, costs in collaborating are bargaining costs related to finding a partner, negotiating with that partner and setting up agreements. There are operational costs for managing the collaborative agreements, and risks of free-riding organizations. Cooperation is not limited to putting contracts in place to gain economies of scale. It includes the management of the relationship with the supplier, supply market, other stakeholders, and with each other. Hoffmann and Schlosser (2001) note that in the case of medium-asset specificity, forms such as lead-buying are considered the most transaction-cost-efficient organisational form (Williamson, 1991; Picot et al., 1996).

Resource based view of the firm perspective

The resource based view of the firm (e.g. Penrose, 1959; Wernerfelt, 1984; Grant, 1995) is concerned with how organisation's internal resource configurations can give a competitive advantage. This advantage is possible when one has resources that are non-imitable, non-transferable, and non-substitutable (Barney, 1991). Although public sector organisations compete over funding (and with the introduction in the UK NHS of patient choice, also may compete over customers), overall the public sector's core focus is not (yet) about competition. It is about how resources can improve the effectiveness and efficiency of running a public sector organisation. In the context of collaborative procurement this means that organisations will work together if they do not have the resources, which can not advantageously be purchased by the market. They will also work together if they do not have purchasing power, either through volume or reputation (Eisenhardt and Schoonhoven, 1996). The extended resource based view also includes the resources of the wider network an organisation is in and acknowledges that strategic resources can be accumulated from the wider network (Matthews, 2003).

Taking a resource based view of the firm can help explain certain forms. For example, in lead buying, expertise on different buying needs and markets is divided amongst partners. With piggy backing one partner does not have sufficient resources. Resources available in-house and in the network can be considered. Ideally, organisations should focus on what they are good at and/or develop what is important to their service and customers (patients, citizens in the public sector) and hand the rest over to others. (cf. core competences: Prahalad and Hamel, 1990). Pooling similar buying needs implies a reduction in resources needed, reducing duplication for the purchase of those categories that will not give a competitive advantage.

Contingency perspective

In earlier work specific attention has been paid to contingency factors to explain the choice of a certain form of collaboration (Bakker et al, 2006). This work builds on contingency studies of Burns and Stalker (1961), Lawrence and Lorsch (1967), and Mintzberg's discussion on different organisational forms (1983) and takes into account the external environment in which collaboration takes place. Contingency theory suggests that with different degrees of uncertainty, different organisations are appropriate (Emery and Trust, 1965; Lawrence and Lorsch 1967; Thompson, 1967). In terms of collaborative procurement, the uncertainty of the supply market is important. The dynamics and

complexity of the supply market, are affected by the number of suppliers, pace of technological advance, entry barriers (Kraljic, 1983), heterogeneity of suppliers, regulations, politics, and societal factors.

When the uncertainty to fulfil a buying need is perceived as high, collaborative initiatives can improve one's strategic position and are appropriate to reduce this uncertainty (Hamel et al. 1989, Pisano and Teece 1989; Eisenhart & Schoonhoven, 1996). Uncertainty may be affected by the complexity and importance of the buying need. When the buying need is important on a local level, uncertainty reduction through collaboration seems most appropriate in the form of an informal collaboration and maybe limiting it to exchanging information to maintain local control. When a buying need is not important on a local level, reducing uncertainty can be more easily handed over to a third party.

Agency theory perspective

Agency theory focuses cooperation when one party delegates work to another party. Agency relationships are where one (or more) individuals – the principal - engage another person (or group of individuals) – the agent – to perform certain activities (Jensen and Meckling, 1976; Hart, 1995; McCue and Prier, 2006). The agency perspective acknowledges that two actors in a relationship have different positions in the process of cooperation and that some control is given up which causes uncertainty. The relationship between the principal and the agent is often described using the metaphor of a 'contract' (Zsidisin and Ellram, 2003). Agency theory aims to address this problem of uncertainty and loss of control by devising the most appropriate 'contract' through outcome-based efforts and/or behaviour-based management efforts (Eisenhardt, 1989; Zsidisin and Ellram, 2003). Purchasing is a typical context in which there are principal-agent relationships that can be described as vertical relations, with the purchasing organisation being the principal and the supplier the agent (Zsidisin and Ellram, 2003). In the context of collaborative procurement an important principal-agent relationship is horizontal, with the principal being a buying organisation that gives some control to another buying organisation that performs some procurement activities on their behalf.

Problems in collaboration arise when there is a conflict of interest, or transaction costs are such that problems can not be completely dealt with through a formal agreement (Hart, 1995). Collaboration has the problem of mutual dependence (Nooteboom et al., 1997) and problems occur because there is information asymmetry. This leads to uncertainty and risk – a concept also dealt with in TCE (Nooteboom, 1996). The extent to which someone will experience information asymmetry as a problem is related to the potential negative consequences (Thomas and Thomas, 1928). Information asymmetry can be due to a lack of information on the other organisation's skills, capabilities, actions (opportunism), aims and expectations (Hart, 1995; McCue and Prier, 2006). Contracts are incomplete and open for interpretation, and uncertainty is also influenced by trust, which can alleviate information asymmetry (Nooteboom et al, 1997). Information can be held back on purpose when there are different agendas or priorities.

Principal-agent relationships can become increasingly complicated when there are multiple layers of agency, or where one actor can act as a principal and as an agent in a

relationship with the same actor such as in lead-buying arrangements (McCue and Prier, 2006). Given the inescapable presence of principal agent relationships, agency theory can help determine which form is most appropriate to reduce information asymmetry.

The choice of organisational form in collaborative procurement

In this section, we use theoretical frameworks to assess which factors influence when which form is most appropriate. Although we acknowledge the different variations in form, we use the theory to first discuss the two extreme forms and come back to the variations in the discussion section.

Virtual networks as a form of collaborative procurement

Transaction cost economical perspective

The TCE perspective helps to explain organisational form when we look at costs and benefits related to purchasing transactions. When initial costs are high and potential benefits are uncertain, choosing a form with low set-up costs such as a virtual network type organisation seems more appropriate. Examples can be found in UK local government where two councils in the South West of England started with a pilot on temporary agency staff. Also, some collaborative procurement Hubs started years ago trialling only a small part of the potential portfolio, slowly growing into larger more formalised third party type organisations (cf. evolutionary models by D'Aunno and Zuckerman, 1987; Johnson, 1999; Nollet and Beaulieu, 2003).

TCE also helps to explain form by looking at the three factors that influence transaction costs: uncertainty, specificity, and frequency. High uncertainty of product use, potential benefits, contract uptake, and alternatives in supply markets means there is a high information need. This leads to high set-up and contract management costs. A small scale virtual type collaboration seems more appropriate to enable members to overcome this uncertainty and keep costs down.

When collaboration is about a specific purchase, meaning the specificity of the transaction is high, this makes setting up a separate organisation with all its costs inappropriate. Using the expertise of another organisation in a lead-buying or piggy-back arrangement is then more suitable and could take the form of a one-off project (cf. Schotanus and Telgen, 2007).

When the purchase is unlikely to be repeated, which means the buying need is infrequent, it is appropriate to collaborate through a virtual type organisation to keep overall transaction costs for that purchase low and not having to support a formal separate structure. However, when the frequency of information exchange is high (e.g. for a complex buying need), a small, local virtual type collaborative form seems more suitable to allow for easy communication and to ensure commitment.

Resource based view of the firm perspective

The Resource Based View (RBV) of the firm perspective helps to inform organisational choice by assessing what is 'key' for service delivery and hence when local control is required or when this control can be handed over to a third party. Organisations should keep some control over the procurement of those products and services that are crucial for local service delivery. In terms of purchasing portfolio categories (Kraljic, 1983): strategic and bottleneck items can be bought under local control and a virtual network is appropriate. However, certain goods or services that seem generic and can be classified as 'leverage' do require some customisation (e.g. accountancy services). These need some local control, and it is not appropriate in each leverage scenario to hand the responsibility over to a third party.

Following the extended resource based view, the procurement of certain services or products are important for functioning as a public sector organisation. If an organisation does not possess the capabilities, it can be worthwhile developing them by learning from others or training staff. In this case, virtual type organisations seem appropriate to allow learning to take place and to build up the required expertise.

Contingency perspective

Taking a contingency perspective, collaboration in a virtual informal network is appropriate when there is more uncertainty as there is more local control and flexibility to reduce uncertainty. This is appropriate in a dynamic and heterogeneous environment, or when dealing with a complex buying need. An example is the buying of non-generic pharmaceuticals in NHS Pharmacy Buying Consortia. They deal with patented products in an innovative market with continuous development, with many products to choose from. Also, in a dynamic market e.g. in terms of price or technology, collaborative contracts for non-investment goods might not always provide the best deal, specifications are harder to agree, and contracts tend to be shorter to enable taking advantage of new developments. The latter means the benefit of reduced transaction costs is minimised. Furthermore, collaborative agreements could constrain further developments in the market, as it takes out some of the competition.

Furthermore, one of the main risks of hierarchical collaboration through a third party is that it can inhibit innovation. Hence, when dealing with dynamic supply markets, local collaboration in the form of loosely tied networks seems more appropriate, as it limits the bureaucracy that can stifle innovation (Goodwin et al, 2004).

Agency theory perspective

Taking the agency perspective, the appropriate form depends on when there is the least likelihood of information asymmetry. Or, when less information is unproblematic (e.g. a smaller council that does not have expertise in buying a certain commodity is happy to hand responsibility over).

Clinicians often have a role in choosing products and services in the NHS (Cox et al, 2005) If procurement has a facilitating role and internal users such as clinicians are powerful, there is likely to be a greater information asymmetry between members, as

procurement cannot control contract uptake. Clearly established processes and procedures could limit freedom of choice and could help build trust and common expectations (Goodwin et al, 2004). Yet, it may be better to ‘start’ informally in the form of a network (e.g. Nollet and Beaulieu, 2003). The bigger collaborative initiatives are in terms of number of members and geographical scope, the more difficult it will be to communicate to reduce information asymmetry, especially through face-to-face contact. In situations where member organisations want to be in control because of the importance of a purchase, or need to have local input because of powerful internal stakeholders, virtual type collaborations are more appropriate. An example of this is the Pharmacy Buying Consortia where local Pharmacy departments have a great influence in determining what they collaborate on.

Third party organisations as a form of collaborative procurement

Transaction cost economical perspective

Using the transaction cost economical perspective, a third party can be used to take care of the whole purchasing process and management of the contract. This is appropriate when the benefits in the pre-contract and contract phase (no duplication of setting specifications, selecting suppliers and contracting suppliers; cost savings through lower price, better quality or additional service) outweigh the costs in the post-contract phase (the management of the contract with the supplier and user organisations). The more frequent the transaction – when it is a re-buy situation and requires frequent ordering (Robinson and Faris, 1967), third party collaboration is appropriate, as the set-up and coordination costs of a third party can be spread out over multiple transactions. A good example is NHS-Supply Chain which has taken over the purchasing responsibility of some main commodity groups from the NHS.

Resource based view of the firm perspective

Items that are non-core and not important for local service delivery can be bought through a third party. In portfolio terms (Kraljic, 1983), third parties can be used for routine and leverage items. In terms of the extended RBV, a third party can be used when at a local level skills and capabilities do not need to be developed for that specific category of products or services.

Contingency perspective

Using a contingency perspective, a third party can be used when the buying need and environment are simple. It is easier to hand-over responsibility as there are less unknowns. An example is the negotiation of framework contracts of generic (non-branded) pharmaceuticals by the NHS Purchasing and Supply Agency for Pharmacy departments in the UK. When a market is dynamic and the buying need is complex, but not important, it is less risky to collaborate through a third party.

Agency theory perspective

Information asymmetry is related to the potential for negative consequences. Collaboration through third party organisations is appropriate with commodity type products such as stationary, as information asymmetry is low and the negative

consequences when things would go wrong around buying stationery are relatively low. This evidenced by the NHS collaborative procurement Hubs or national framework contracts which started with commodity type products. Procedures have been put in place that reduce maverick buying and constrain the room for opportunism (Nooteboom et al, 1997), which means there is less risk involved in handing purchasing over to a third party.

Discussion

We have used different theoretical perspectives to help to assess when the two main forms of collaboration are appropriate by focussing on different factors (see Table II). All the factors that we derived from the theoretical frameworks have to be taken into consideration together, as they all show a different part of the picture. The framework in the table provides a starting point for discussion and reflection on when to use which form. If different factors score on different sides of the continuum a trade-off will have to be made.

<Table 2 about here>

Variants of the main forms

Transaction cost economical perspective

If the cost-benefit ratio of collaboration would be unevenly spread, as is the case when organisations of different sizes work together, piggy backing seems appropriate. As the smaller organisation (e.g. local authority) may not have excess resources lead-buying or sharing an officer would be relatively difficult to realise, and the larger authority becomes the sole lead-buyer. The effectiveness of this form depends very much on the incentive for the larger authority to allow piggy backing as costs and benefits are unevenly spread. The incentive can be an improved reputation, or the small organisation can pay a small fee to cover some costs.

Professional networks can be used as a starting point for collaboration in the case when benefits are likely to be low (low frequency of demand), buying asset specific products and where costs could be high. If collaboration has to start from scratch, trust and familiarity has to be built up. Sharing tasks in the form of lead-buying or sharing resources in the form of shared services can be chosen when uncertainty is low (dealing with standard products), frequency of demand is high and benefits are unclear. Setting up a separate organisation would be inappropriate due to costs.

Resource based view of the firm perspective

The choice between a professional network and lead-buying lies in the relativeness of the qualitative judgement of 'importance'. Professional networks can be used for important categories whereas lead buying is appropriate for products of relatively lesser importance. In principal, lead-buying arrangements can cover similar product categories to third party purchasing initiatives, yet which form one chooses will depend on the cost-benefit picture (see TCE above). Complete outsourcing could be done for product categories that are unimportant and local input is unnecessary, such as stationary. Third party purchasing

would cover those categories that more directly affect the primary process but are still not core (e.g. MRO goods). A third party advisor could be useful when products are important and local control of the specifications is required, yet which could benefit from some central coordination or standardised process. An example is CT scanners in the NHS. They have a huge impact on hospital turnover, yet the tender process (under EU regulations) is relatively standard. Suppliers and hospitals would benefit from a centrally coordinated plan to pre-empt supplier problems on resource utilisation in manufacturing, and a standardised approach to make tender processes more efficient.

Contingency perspective

Using the contingency framework, the choice between either professional networks and lead-buying, or third party-third party purchasing and third party-outsourcing depends on the scale of uncertainty. This is influenced by supply market dynamics and complexity of the buying need. For example, a third party-advisory collaboration seems appropriate when the market is stable, and the third party can help define the need and support the tendering process. If the buying need is more straightforward, the third party can help standardise the sourcing and tendering process. If the market is stable and the buying need is a simple re-buy, third party purchasing seem appropriate.

Agency theory perspective

Agency theory can help explain some of the variation in forms. In instances where there is information asymmetry, such as between a big city council and a small local authority, piggybacking seems appropriate. Parties might not put a high value on the asymmetry, and overcoming the different levels of expertise is unlikely. If collaborating councils all lack expertise, the shared services form is appropriate.

Conclusion

In general, virtual organisations tend to be small scale where there is direct and immediate interaction between stakeholders. Third party organisations tend to be larger organisations, and more regional or national, working with a larger membership base, as they have to support their infrastructure. Professional networks can be national, regional, or local. The latter generally can be more collaborative due to ease of contact between neighbouring councils/hospitals. National / subject area groups are also forms of collaboration and tend to be very informal. Beyond third party purchasing is outsourcing to the private sector, relinquishing public sector control.

Building on the evolutionary models of collaborative procurement, collaboration can be seen to start with virtual professional networks where people know each other and start to buy together. This can lead to a form of lead-buying, shared services or piggy backing. Which form evolves depends on the ease of showing benefits against low costs (e.g. can we share the burden? Is there a lack of resources and expertise to start with? Is there a big authority nearby who already has good contracts in place?). Whether then collaboration evolves to a more independent third party depends on the other factors outlined in the framework. When more buying categories become the subject of the collaboration between local authorities or hospitals, there is an impact on the cost-benefit ratio. This

depends on if the same resources can be used (same IT system, same purchasing officer, etc). This would inevitably impact on which form could be appropriate (e.g. the more they collaborate on different activities, the more it can make sense to use a third party form).

The theoretical frameworks are useful in assessing when to use the extreme forms of collaboration but are more difficult to apply for the different variations of the forms. The frameworks can be used to focus on constraints. For example, the resource based view of the firm is helps to focus on which resources are lacking when explaining the choice between shared services, piggy-backing and lead-buying.

The limitation of the framework is that it uses mostly qualitative factors and indicators and no ‘hard’ measurements. However, it may help to facilitate internal discussions on different forms. It can be used as a tool to assess which form might be most appropriate for different buying needs or when developing a strategic plan. Future research could focus on further empirical testing of our initial framework, extending it by including more perspectives and private sector organizations. It would be of value to include ‘hard’ measurements. Further research could also more specifically explore constraints and why certain forms would not be effective in certain circumstances.

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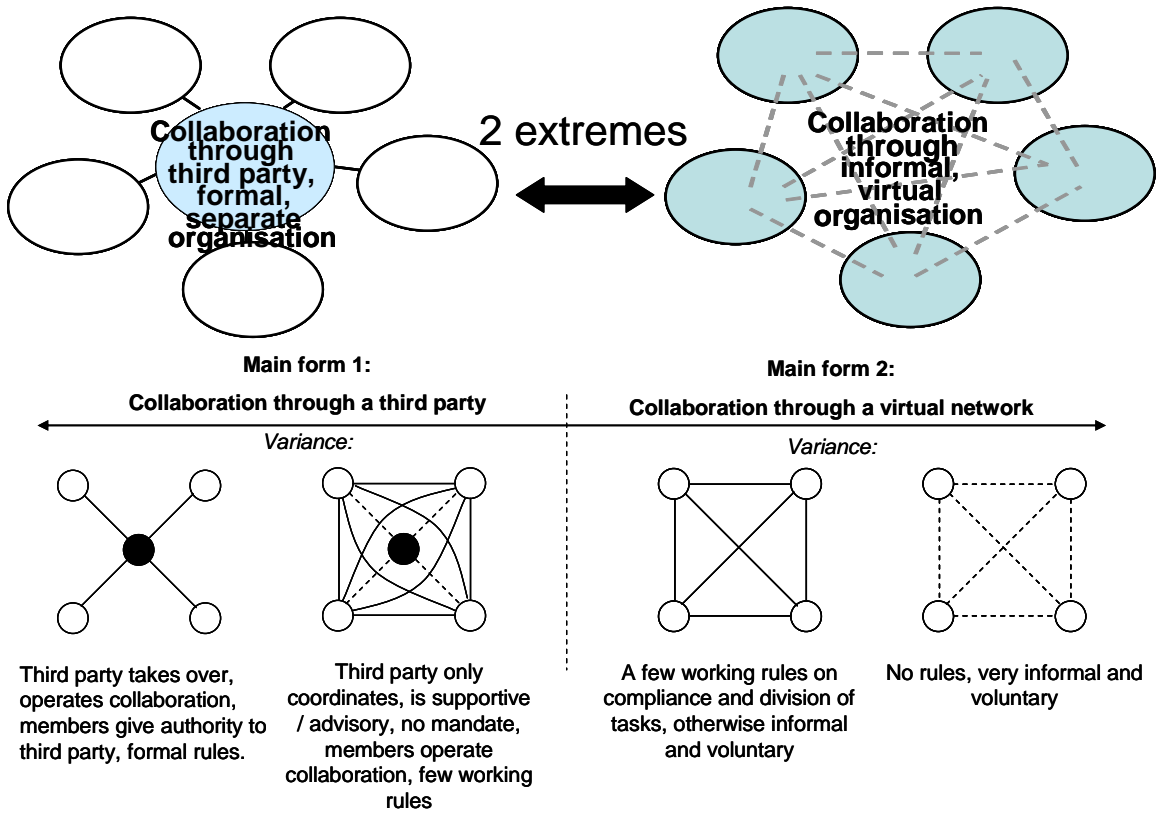
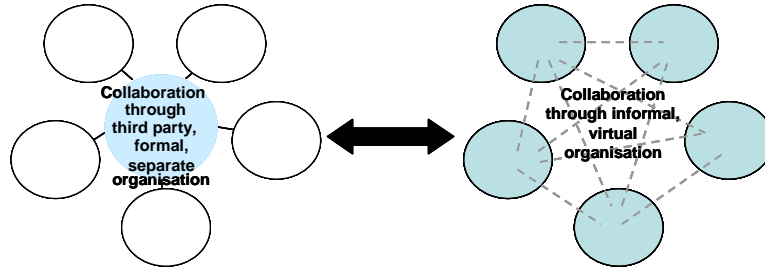


Figure 1. Two main forms of collaborative procurement initiatives and variations

Table I. Forms of collaborative procurement, strategy and skills

Organisational components	Strategy	Task	Individuals and skills	Organisational arrangements
Collaborative forms				
<i>“professional network”</i>	Improve effectiveness, learn from each other to build up in-house skills and knowledge.	Exchange information, experiences and data (occasionally, some consolidation of spend for general commodities).	Involvement from purchasers and / or internal users. Main skills and knowledge around product categories and their application (not necessarily purchasing). Strategic and communication skills required.	Voluntary relationships, individuals involved do so within own role. When it requires much time and resources internal management support is required. Collaboration often based on prior contacts, close proximity or existing professional bodies/networks.
<i>“Piggy backing”</i>	Improve efficiency (use buying power of other organisation). Could improve effectiveness by allowing development of other strategic capabilities, e.g. strategic purchasing.	Exchange information and buy from same contract. Management of relationships with supplier and host council. Host to proceed as usual, keep in mind needs of piggy backers.	Purchasers at host organisation needs negotiation, communication and supplier relation management skills. Piggy backer needs operational skills when ordering from contract and responsible for informing host organisation on uptake and supplier performance.	Voluntary relationships. Clear communication and agreements on expectations and contract usage between host and piggy backer and assuring agreement with supplier, few meetings especially in initial phase, ordering done by piggy backer. Relations, language and beliefs based on proximity and working in same geographical area.
<i>“Shared services”</i>	Improve effectiveness, develop skills and capabilities. Learn from shared services.	Exchanging experiences.	Individual will have purchasing knowledge and skills and will need to have good negotiating skills to deal with multiple organisations’ demands.	Organisations have to agree responsibility and duties in terms of time, finance, support. Relationships and communication occurs between staff from sharing organisations but shared purchasing officer becomes central contact to link cultures, beliefs and ideas.
<i>“Lead-buying”</i>	Improve efficiency and effectiveness, take advantage of combined buying power and develop specialist skills in specific product categories.	Create division of tasks based on experience or turn-over, to reduce transaction cost and benefit from economies of scale.	Individuals from different members involved. Purchasers need negotiation, communication and technical skills and knowledge.	Voluntary relationships. Agreements on division of tasks, exchange of data, priorities, contract uptake and termination. Tasks undertaken independently, but when more developed, possibly agreements on purchasing procedures. Created dependency, communication via lead-buyers to other organisations.
<i>“Third-party advisory”</i>	Improve effectiveness, learn and develop skills by making use of centralised expertise.	Gain specialist knowledge and skills, advice members and/or help to promote profile and importance of purchasing.	Staff works for third party, focus on marketing purchasing services, highly knowledgeable, skilled, experienced, good interpersonal skills.	Use of third party often cannot be mandated. If used, clarity on fees and performance measurement necessary. Different users of third party can start to build relationships and communicate.
<i>“Third party joint purchasing”</i>	Improve efficiency (use buying power). Could improve effectiveness by allowing development of other strategic capabilities, e.g. strategic purchasing.	Take over purchasing responsibility from members but with member input.	Staff works for third party, have in-depth purchasing skills and market knowledge of variety of categories. Negotiation, communication and relationship management skills are important.	Structured. Board of directors are representatives of members. Agreements on division of tasks, purchasing processes, who to involve when, exchange of data, priorities, contract uptake and termination. Agreements on objectives, performance measurement, savings allocation and future direction.
<i>“Third party outsourced”</i>	Improve efficiency. Could improve effectiveness by allowing	Third party to provide purchasing and logistics service for customers	Individuals work for third party. No member influence other than specifying requirements and customer feedback. Negotiation,	Structured, once deal is made, normal purchasing contract between client and third party provider put in place. Third party

development of other strategic capabilities, e.g. strategic purchasing.	communication and relationship management skills are important.	becomes decoupled from members with own goals, language, culture etc.
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Forms from literature:

<i>McCue & Prier (2006)</i>	Buyer model	Broker model	Piggyback model			
<i>Aylesworth (2007)</i>	For profit enterprises	Member owned service bureaus	Regional purchasing agencies	Voluntary cooperatives	Local network	
<i>Schotanus & Telgen (2007)</i>	Third party	Project group	Programme group	Lead buying	Piggy backing	Project group

Forms from empirical study:

3 rd party outsourcing	3 rd party purchasing	3 rd party advisory	Lead buying	Piggy backing	Professional networks
			Shared services		

Figure 2. Mapping of variations of collaborative procurement on the two extreme forms.

Note: project groups can be a few organisations that come together to try-out some collaborative contracts (e.g. through an e-tender), which can mean a project group is set-up consisting of member representatives, or it is run by a lead organisation without forming a separate new temporary organisation. Or, when dealing with exceptional projects (e.g. building projects) a project-team can be set-up as a separate temporary unit or formal programme.

Table II. Collaborative procurement framework – factors that influence form.

Factors	Main two forms of collaboration	
	Collaboration through a virtual organisation (no separate organisation is set up)	3-d party collaboration
Cost/benefit ratio (set-up costs, post-contract management costs, benefits/ advantages): - asset specificity - uncertainty - infrequency buying need - frequency information exchange	High	Low
Core - non-core of collaboratively purchased products / services	Core	Non-core
Uncertainty of: - the environment: - dynamics - complexity - the buying need	High	Low
Potential information asymmetry: - presence of purchasing procedures - powerful internal stakeholders (internal users) - facilitating role of purchasing	High	Low

Note: In this paper, we discuss situations in which collaborative procurement is preferred above individual procurement.