

Key Characteristics of SME Procurement: An Empirical Study.

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Summary: This research is part of the i-Compete project on improving competitiveness of small and medium-sized enterprises (SMEs) in the South West of England through best practice procurement. It is jointly funded by the ERDF (through Universities South West), the Chartered Institute of Purchasing and Supply (CIPS) and supported by Beacon South West. This paper gives a brief overview of the literature before exploring whether the findings on SMEs in the South West of England supported or challenged that previous research.

Key words: Procurement performance, SMEs, Procurement skills and best practice

1. Introduction

This paper is the second stage in a research project looking at best practice procurement of SMEs in the South West of England. It builds on a literature review of procurement by SMEs (James et al, 2011) and involves data collection via an online survey and follow up interviews to ensure triangulation, reliability and validity. The objective of the paper is to study current procurement practice of SMEs in the South West of England and its links to the existing literature. Suggestions are then made on what these organisations can do to improve, based on best practice evidenced by the interviewees. The research team acknowledge the help of Professor Richard Lamming and Hilary Paveley with writing our survey

One strong message from the brief existing literature on purchasing and procurement within the field of SMEs is the need for further study in this area. Purchasing has been recognised as important to small companies (Dollinger and Kolchin, 1986; Presutti, 1988 in Ellegaard, 2006) as “small and medium enterprises contribute approximately 50% to the UK gross domestic product and nearly 70% to employment” (CBI, 2000 in Quayle, 2002, p152). However, from as far back as 1994, commentators pointed out that “Small buyers, who as a result of their weak and untrained nature need assistance are currently being extremely poorly served by academia.” (Ramsay, 1994, p19). This seemed to continue through the 1990s and the start of the twentieth century as academics noted that “purchasing within the smaller firms themselves receives little or no attention.” (Quayle, 1999, p26 see also Jenner & Johnsen, 2002; Quayle, 2002, Zheng et al, 2004) as “there is a dearth of information about small” firms (Quayle, 2000, p118).

Another weakness of the theory is that “the literature on purchasing practices in SMEs...has typically drawn from work on larger firms” (Morrissey & Pittaway, 2006, p273). One example is in the area of purchasing motor carriages, where “smaller businesses have been left with relatively few guidelines and insights to help them in their transportation function” (Evans et al, 1990, p46). “Mainstream purchasing models and techniques, grounded from the perspective of dominant and highly resourced companies, are being used to measure the efficiency and effectiveness of small firms. It is questionable how appropriate these techniques are when applied to much smaller firms with fewer resources” (Morrissey & Pittaway, 2006, p279-280). This paper attempts to partially address these concerns.

2. Methodology

A literature review was carried out covering both the subjects of purchasing, procurement and operations management and of SMEs as well as a review of several high ranking journals focusing on strategy. Secondly, references of key articles identified from the above sources were studied in more detail. Partly due to the scarce nature of such literature, further sources such as conference papers, text books and trade literature were also considered. An online questionnaire was formulated, partly based on this literature. The majority of questions were quantitative asking questions with ordinal scale data response. To enhance the validity of the survey a pilot of 10 SMEs was undertaken. Following the pilot, insight was sought from two academics external to UWE Bristol. Minor amendments were made to the pilot prior to the launch of the full survey.

SME respondents, both manufacturing and non-manufacturing, were targeted from the South West of England, using a modified FAME database. The individuals were either SME owners/owner-managers, or those with primary responsibility for the firms' procurement. Prior to sending out a request to complete the survey, each organisation was contacted via telephone to identify the most appropriate respondent and to ensure that they were willing to participate. 95 responses were received from a total of 450 email requests; a response rate of 21%. The survey respondents split between manufacturing, retail/distribution/services and others with a majority having less than 100 employees and approximately two thirds having a annual purchasing spend below £10m. A control group of a further 25 UK respondents was also collected from a population of CIPS members.

In addition, 22 telephone interviews were carried out. The interviewees were those that were identified from the survey results to have shown some evidence of best practice in procurement activity. They were asked semi-structured questions with more in-depth qualitative data relating to the survey questions and the themes derived from the literature. After the interview stage, the research team carried out a dissemination event to individuals from 12 SMEs and interested parties within the Bristol area. This focus group discussed findings from the survey and interviews to further validate these findings. Some of their insight is mentioned within this paper. The majority of this paper will focus on the 'non-CIPS' sample, namely those initial 95 responses from SMEs in the South West of England. A brief synopsis of some of the literature and findings is now given.

3. Literature Review

James et al (2011) grouped the (slight) SME procurement literature into a number of overarching categories. This review outlines each of these in turn.

3.1 Structure

The first of these was entitled 'structure' (Presutti, 1988) (e.g. the centralisation of procurement into a function or individuals responsible for this area). According to Jenner and Johnsen, (2002) the separate purchasing function is more of a feature in the more mature, typically larger SMEs. The findings of Morrissey and Pittaway (2006, p282) state "that those

SMEs in manufacturing have a greater tendency towards establishing a separate purchasing function”.

3.2 Power and Strategy

The second grouping in the literature was under the title ‘power and strategy’ (linked to buyer-supplier relationships) (Morrissey and Pittaway, 2006). Ramsay, (1994, p10) asserts that “strategic planning is a luxury that most small companies do not have the time to indulge in.” Later in this research this view is tested against those of Lamming and Harrison, (2001, p606) who point out that “it appears that small firms can and do operate with purchasing strategies”.

3.3. Scarce Resources

‘Scarce resources’ (Huang and Brown, 1999) are mentioned several times within the literature. There is a link to this subject from the rationale for this research highlighted above. “Mainstream purchasing models and techniques, grounded from the perspective of dominant and highly resourced companies, are being used to measure the efficiency and effectiveness of small firms. It is questionable how appropriate these techniques are when applied to much smaller firms with fewer resources” (Morrissey & Pittaway, 2006, p279-280).

3.4 Training, Learning and Innovation

One other group identified was the role of ‘training’ (Quayle, 2002). Linked to ‘training’ was the group of ‘learning and innovation’ (Presutti, 1988). One problem for SMEs is that they have “scarce resources available for learning and testing new concepts (Noteboom, 1994 in Axelsson & Larsson, 2002, p1).” Few SMEs “are likely to have the resources to be able to assist in the training or awareness of training of their suppliers to any significant extent” (Ramsay, 1994, p15). This is supported by Jenner & Johnsen (2002, p348) as the majority of suppliers of the SME they researched “were of the opinion that little, or no supplier development actually occurred.”

The literature has called for formal education in purchasing rather than relying on on-the-job training (Presutti, 1988). One of the areas where purchasing has room for improvement is in its interaction with the wider business environment made up of extra-firm organisations such as government, academia and industry (Saad et al, 2007). One of the leading actors in this area in the UK is the Chartered Institute of Purchasing and Supply (CIPS). One area of training identified as important was that of the skill of ‘negotiation’. “Few academics have addressed this specific requirement” (Ramsay, 1994, p16). Dollinger & Kolchin (1986, p40) point to “the importance of using outsiders to improve the performance of small business operations.” This is repeated by Wagner et al (2003, p353) in the context of e-business as “the role of government agencies and support services is clearly critical. For other forms of training, the literature mentions half-day meetings attended by both the buyer and a cross-functional team from the supplier / carrying out an environmental audit (Williams, 2004).

3.5 Other Categories

The use of varying types of purchasing consortia, for SMEs, has been mentioned in the literature (Batchelor et al, 1994; Essig, 2000; Axelsson & Larsson, 2002; Quayle, 2002;

Morrissey & Pittaway, 2004; Morrissey & Pittaway, 2006) as well as the use of 'information technology (IT)' (Wagner et al, 2003) and the 'wider business environment' (Saad et al, 2007). The paper now addresses various aspects of these themes to test whether what was mentioned in the literature matches the findings from the South West of England sample.

4. Findings

These findings are initially put in the order of literature category identified by the literature review above. Section 4.6 will concentrate more of findings from the interviews.

4.1 Structure

In terms of structure, according to Jenner and Johnsen, (2002) (as mentioned above) the separate purchasing function is more of a feature in the more mature, typically larger SMEs. Our sample had no significant correlation between the two variables of size and purchasing activity. The research tested the findings of Morrissey and Pittaway (2006, p282) regarding whether sector affected the up take of a purchasing function. A Chi-Square analysis found that there is a greater than expected count for the manufacturing firms that have a dedicated purchasing function, for our sample. The Chi-Square was significant at the 0.033 level.

Respondents were asked to what extent do their external purchasing activities contribute to the overall competitiveness of their organisation. Over 43% stated it was a key factor on most of our sales / contracts won with a further 15% stating that it was a key factor on all of our sales / contracts won. This would indicate that purchasing within SMEs has aspects of the supportive and integrative levels of Reck & Long's (1988) maturity model, namely the more 'developed' and 'influential' position of purchasing within the firm. Some interview data, from a drinks wholesaler, pointed out that there was still a focus on cost, as "by having a dedicated function we have been able to drive down our cost prices."

There didn't seem to be a relationship between the contribution of purchasing and the size of the SME or the annual spend. However when it came to comparing this with the existence of a dedicated purchasing function there seems to be a relationship which is significant (just) at the 0.1 level

4.2 Power and Strategy

In terms of strategy, while most small firms do not have a separate procurement strategy and those larger firms are more likely to always have a procurement strategy, there is an indication that even small (0-50) firms will develop a procurement strategy as and when the need arises. For the non-CIPS only sub-sample there doesn't appear to be any differences in purchasing strategy between the manufacturing and the non-manufacturing companies. A question was asked about the establishment and documentation of a procurement strategy. This tests the assertion by Ramsay, (1994), against the views of Lamming & Harrison, (2001), stated in the literature review above. There seems some evidence to support both views. While most small firms do not have a separate procurement strategy and those larger firms are more likely to always have a procurement strategy, there's some indication that even small (0-50) firms will develop a procurement strategy as and when the need arises. In one case, the formation of evaluating key suppliers to try to form key partnerships and develop

relationships was linked to the ability to “drive our buying power in order to improve sales by getting closer to 13 companies at the outset”.

Regarding power and structure the research team was interested in whether the respondents had a purchasing function and comparing that to the extent to which ‘customers influence and support the approach you take towards your external purchasing activities’ (survey question 10). In a Chi Square analysis the two questions was significant at the 0.05 level; those with a purchasing function were **less likely** to be influence by their customers. One supplier that was influenced stated that their customer had pushed them towards the SC21 programme (SC21, 2012). Customer influence was also checked against the sector of the SMEs. There appears to be no significant difference between manufacturing and non-manufacturing organisations within the sample. There also appears to be no difference between the manufacturing and non-manufacturing South West SMEs when looking at the extent to which firms consciously establish and document a procurement strategy to support the over business strategy. For one manufacturer there is a link as “our purchasing strategy flows out of the overall company strategy...it is not a standalone strategy. It is influenced by the business strategy. I report to the MD and there are a further 2 executive directors and a management team involved (in) other functions. All have involvement in the purchasing strategy”.

4.3 Scarce Resources

Some tentative findings from the survey would point to lack of resources perhaps not being as influential as previously thought. When asked what the main obstacles to improvement of purchasing were, over 50% of the South West SME respondents chose ‘lack of resources’ (the most common answer). Nearly a third of the respondents also chose ‘cost of investment in purchasing skills’. When asked if there were any other obstacles they would like to add to the options, five of the respondents entered a lack of ‘time’. One circuit board manufacturer stated that “we do not have a dedicated resource (for purchasing) but we spread it amongst senior managers” which indicates a lack of resource and lack of purchasing function. From our survey, there does not appear to be a linear pattern whereby those that have a greater spend have a higher number of buyers. However caution should be applied here as the average number of buyers for larger SMEs may be kept low due to the lower number of respondents in those categories (which may be affected significantly were the sample size increased).

4.4 Training, Learning and Innovation

Training appears to be an area in which purchasing related activity is more advanced in the manufacturing sector than in other sectors. The following forms of training are significantly more likely to have been carried out by those in manufacturing (figures in brackets refer to Chi Square significance measure): ‘CIPS professional qualifications’ (0.002), ‘negotiation skills’ (0.006), ‘other external purchasing courses’ (0.004), ‘employed an external agency to run in-house training’ (0.041), ‘formal / informal support from universities or other academic institutions’ (0.025). When compared against level of competitiveness, those that have carried out the following forms of training are significantly more likely to have purchasing impact on the overall competitiveness (figures in brackets again refer to Chi Square significance measure): ‘CIPS professional qualifications’ (0.048), ‘other external purchasing courses’ (0.058) and ‘employed an external agency to run In house training’ (0.064). ‘Negotiation skills training’ and ‘formal / informal support from universities or other

academic institutions' appear to have no significant relationship to those that believe purchasing contributes to competitiveness. The lack of interaction with the wider business environment was underlined by the interview data. Other training carried out by the sample included the topic of innovation as well as other aspects of business and management such as human resources and accounting. Regarding use of IT, it has been shown that firms can be at different stages in their adoption of e-business (Wagner et al, 2003). For those in this sample, "purchase order creation" 67% used enabling technology compared to that of 23% using "electronic tenders / auctions".

Our findings also point to there being a significant relationship (at the 0.01 level) between the size of the organisation and the skills training that organisation has adopted. Those larger SMEs are more likely to have CIPS professional qualifications than the smaller SMEs. Our findings point to there being a significant relationship between the size of the organisation and the skills training that organisation has adopted. When it comes to looking at support from academia, there doesn't seem to be any significant relationship between that and the size of organisation.

"The issues relating to innovation (R&D and EDI) are not considered important" (Quayle, 2002, p153) by SMEs. One view that this research seeks to test is that of Jenner & Johnsen (2002) who also point to joint problem solving working in the case of an SME. However only 11% of respondents stated that they measure their ability to contribute to their ongoing continuous improvement, learning and innovation. Other critical factors are the need for basic benchmarks to measure the performance of purchasing and supply and training – avoiding the "it is too difficult/we cannot measure the unmeasurable (sic)" syndrome." (Quayle, 1999, p28). "Measuring supplier performance" was selected by 39% of respondents.

4.5 Other categories

When looking at procurement consortia, Quayle (2002) suggests a purchasing service seems popular with SMEs acting as either a consultancy or in sourcing difficult-to-find commodities. There was some evidence of this being the case in the interview data. One agricultural SME point to using "a purchasing service for our utilities and telecoms spend – this has resulted in both savings and a better understanding of the market. We feel that has been a very positive experience." A manufacturer of circuit boards pointed out that one "small specialist company...devotes itself to searching high and wide to getting use the quantities we want and can't find. This enables us to save on the expense of buying excessive amounts of stock and also the time it takes to track it down."

Despite these individual cases however, 69% of our total respondents said they never used a purchasing service in this way while 21% stated that they only used it once or twice in the last 3 years. In our survey, including those respondents from the CIPS control group, 81% stated that they never participate in a purchasing consortia or network (a further 12% stated that they rarely use consortia). One outlier uses them for at least 50% of their spend. The focus group discussed the difficulties in joining or forming consortia between companies with differing purchasing spend, timescales and objectives being several of the reasons offered.

For the non-CIPS respondents only, nearly 80% of respondents either never or rarely use a purchasing service (See table below). This contrasts vividly with the findings of Quayle (2002, p155) who states that "The research identified strong interest (74%) in the use of a purchasing service. Some 36% of respondents considered that they would use such a service

for all purchases and 64% considered that they would use the service for part of their purchasing needs. Similarly there was a strong interest in using the service as a consultancy (68%) and for finding new or difficult-to find products (78%). Price and quality were identified as the most important elements of a purchasing service performance.” The difference may arise in the phrasing of the questions. Quayle’s (2002, p158) paper puts the questions in terms of possible future behaviour (“Would you be interested in using (an experienced) buying organisation to carry out your purchasing activity?”) whereas the i-Compete survey asked about ACTUAL behaviour (“Do you use a purchasing service acting as a consultancy or for sourcing difficult to find commodities / services?”).

The research also looked briefly at the countries from which the SMEs’ products and services are sourced. Agndal and Axelsson (2004) point to SMEs choosing foreign suppliers through need rather than through opportunities. A similar point was made in our interviews. In one case where SMEs importing particular food types were limited to a particular source (which may or may not be overseas): “we source the majority of our products from abroad because we are in the Mediterranean food business and the ingredients are not found in the UK!”. One manufacturer pointed to a focus on quality where “over 50 per cent of our products come from abroad – from France and Germany – and it is just not available in the UK for the quality which we require.” This was echoed by one SME in the auto-parts sector as “the reason we buy from our supplier in Europe is quality.”

Table 1. Aspects of Literature Tested by Questionnaire

<i>Aspect of Literature</i>	<i>Related Outcome.</i>	<i>Test Carried Out (significance level)</i>
Sector affect on purchasing function uptake (Morrissey and Pittaway, 2006)	Manufacturing firms more likely to have purchasing function	Chi Square (.03)
SMEs and purchasing strategy (Ramsay, 1994; Lamming and Harrison, 2001)	Larger SMEs more likely to have procurement strategy	Chi Square (.001)
Few SMEs have resource for training of suppliers (Ramsay, 1994)	Significant relationship between the size of SME and skills training adopted Training more likely to be carried out by manufacturing SME:	Chi Square (.004)
	i - CIPS professional qualification	i - Chi Square (.002)
	ii – Negotiation skills	ii – Chi Square (.006)
	iii – Other external purchasing course	iii – Chi Square (.004)
	iv – Employed an external agency to run in-house training	iv – Chi Square (.041)
	v – formal / informal support from universities or other academic institutions	v – Chi Square (.025)

It has been shown that firms can be at different stages in their adoption of e-business (Wagner et al, 2003). When asked about which enabling technology they use as part of their purchasing to pay process, the responses varied from “Purchase order creation” at 67% to that of “electronic tenders / auctions” at 23%.

4.6 Improving Competitiveness

A fan manufacturer based in the South West, highlights the importance to competitiveness of purchasing and what it does to work with its suppliers. For them, purchasing activities have contributed to competitiveness in two ways. Firstly “it transfers directly to the bottom line – if we get better pricing. Secondly – it has enabled us to achieve more flexibility in what we do – so if we have purchasing options, to use different suppliers or have varied products to source, it gives us more options in the market place.” This organisation did not limit its focus on performance just to itself. They also measured the top fifty of their production suppliers. This consisted of three subjective measures: invoicing, acknowledging purchase order and general communications. There is evidence from the interviewee that this SME’s approach even touches on a learning cycle. “In terms of performance – it reaffirms what we already knew. It gives us a platform to send it out to the suppliers so that they can learn to improve from the feedback.”

It is clear from one of our respondents, a ship builder and repairer customers can have an influence over how SMEs deal with suppliers. Also some skills that are useful for dealing with suppliers can also be used when dealing with customers. This case also gives another example of how SMEs can use tools, measures or techniques that would usually be associated with larger organisations. This SME implied that not all customers want the same thing. “Some customers specify which suppliers they want us to use. Some of our clients insist we only use original equipment manufacturers (OEMs) for equipment overhauls – where as others give us a bit more leeway. Working with OEMs has been useful as they can support us with product knowledge and expertise. They issue bulletins with information on parts which can fail and what to look for in engine failure.” Another effect the customers has in on cost. “Knowing what the client wants has a cost implication – it depends very much on the age of the equipment we are servicing – whether it’s under warranty or will require more considerable expenditure.” These choices can have an impact on issues such as cost, quality and dependability. This SME also gave us details on how they measure the performance of their suppliers. One of the methods they use is regular contact through review meetings. “We hold these with each of our long term agreement (LTA) suppliers every 6 months. We have around 45 of these LTAs. Meetings are attended by senior management of each company.” The content of these meetings, which are recorded as key performance indicators include: safety record, responsiveness to request for quotes, cost reduction initiatives, competitiveness, ethics, work records and payment records. For the safety record, the SME keeps accident statistics for each supplier. The responsiveness data, the quotes must be returned to the SME by the deadline stated. We can see that the issues of cost, quality and dependability that concern their customer, are cascaded down this part of the supply chain.

One organisation that can help with competitiveness is CIPS. Within the South West, the knowledge and experience of the role played, and the services offered by the Chartered Institute of Purchasing and Supply have varied quite substantially. One respondent stated that they had decided to become CIPS chartered since filling out our survey while others were unaware of CIPS. One purchasing manager, from a food industry equipment manufacturer, had undergone a negotiation training module as part of their CIPS training and saw this as a benefit of CIPS membership. This training provided “vital information, techniques and most importantly methods of preparing for negotiation which have been excellent for up-skilling me from an industrial purchasing point of view.” The wider subject of negotiation training in general (either provided by CIPS or other providers) appeared in the research several times. Stated benefits included: to gain more influence when negotiating, to enable better preparation, to know how to leverage influence and to enable purchasers to win price freezes on commodities. For that last benefit, a respondent stated that the price freezes have been

achieved “for the coming year, through signed agreements when we are seeing the costs rising rapidly, but as we have been committed to a time frame, we have kept last year’s prices. Also through building strong supplier relationships we can obtain very small quantities as a favour, well short of the minimum order, saving us a great deal of waste or stock which will never get used and also require storage too.” This gives an indication that some aspects of the buyer-supplier relationship that are usually associated with large powerful buyers can be achieved by SMEs as well. Two South West manufactures, one in the aerospace parts sector and another in data communication hardware gave insights into the roles that the wider business environment can play to support SMEs in their purchasing. The former stated that it sought procurement advice and knowledge from professional bodies, academia and government while the latter focused its discussion on the roles played by universities, both in traditional teaching and in a knowledge transfer capacity.

5. Conclusion

In conclusion, the research re-affirms a number of areas of best practice purchasing for SMEs identified by the literature however it also provides some evidence that challenges that literature, namely the use of consortia or engaging with the wider business environment. This is limited however to those SMEs in the South West of England so a repeat study with a wider scope of the whole of the UK would provide valuable further research. Within this sample there are some aspects with no significant difference between manufacturing and non-manufacturing along with challenges for SMEs (for example, see section 4.2 above). One viewpoint from the research team was that SMEs may be following the development of larger organisations in terms of their approach to purchasing (but are currently lagging behind). Future research may look to see what similarities or differences there are in purchasing development between large and small firms and between manufacturing and non-manufacturing for both types of firm.

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