Strategic sourcing supplier selection misalignment with critical success factors: Findings from multiple case studies in Germany and the United Kingdom

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Abstract

Strategic sourcing plays an important role in organisations' performance. Strategic sourcing has been researched extensively using empirical studies as well as review work, such as strategic sourcing importance, issues and challenges, processes, source selection criteria and framework, and so on. However, there is no research on critical success factors for strategic sourcing specific to industry and country. This research aims to qualitatively evaluate and understand the current role of strategic sourcing, the critical success factors for business performance and its relationship with strategic sourcing, strategic supplier selection criteria from multiple stakeholders' perspectives specific to industry and country. This research studies twenty organisations from Germany and the United Kingdom covering two industry sectors - construction and electronic component manufacturing. We consider five organisations from each industry sector and each country. Finally, we use the findings to develop a set of propositions.

Keywords: Strategic sourcing; Critical success factors; Strategic supplier evaluation criteria; Stakeholder management; Multiple case study

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1. Introduction

Strategic sourcing has emerged as an important enabler for managing global supply chain because organisations are exposed to a wide variety of supply chain risks and disruptions nowadays. For instance, the financial crisis led to several supplier bankruptcies, which resulted in supply shortages. Despite this, the nuclear catastrophe in Fukushima in 2011 (Japan) and the volcanic ash in Europe in 2010 (Iceland) led to significant disturbances in the supply chain (Kotula and Reiß, 2011). Furthermore, other risks such as wars and terrorisms, political instability, diseases or epidemics, product recalls, pirate attacks on container ships tremendously affect the supply chain (Chopra and Sodhi, 2004; Meena *et al.*, 2011). All these supply chain risks have direct impact on long-term strategic sourcing decision, and have led many organisations to consider switching from single sourcing to multiple sourcing strategy.

Strategic sourcing has been extensively researched using empirical studies as well as review work, such as strategic sourcing importance, issues and challenges, processes, source selection criteria and framework, and so on (Narasimhan and Das, 1999; Rossetti and Choi, 2005; Kausik and Mahadevan, 2012). Nevertheless, there is no research on critical success factors for strategic sourcing specific to industry and country. Therefore, this research aims to understand the current state of strategic sourcing in specific industry and country. This research intends to address five research questions - how the role of strategic sourcing is established within an organisation, which success factors are critical to organisations for enhanced performance, which strategic source evaluation criteria are considered by the organisations, how stakeholder collaboration contributes to strategic sourcing, and is there any misalignment between the organisations' practices and academic literature?

In order to address these research questions, we undertake a multiple case study method using twenty cases in electronics manufacturing and construction sector in Germany and the UK. Both the sectors and countries were affected by the supply shortage and financial crisis. Furthermore, the selection of the construction sector allow cross industry comparison and to shed more light into the sourcing discipline of the construction sector. The paper is organized in five sections. Section 2 reviews the current literature on strategic sourcing to establish the theoretical foundation, identify research gaps and develop a research framework. Section 3 describes the research method that has been adopted to answer the research questions. Section 4 discusses the findings and develops a set of propositions. Finally, section 5 concludes the research with clear statements of both theoretical and practical contributions, limitations of the study and scope for future research.

2. Literature Review

In this section, we reviewed literature studying the role and importance of strategic sourcing, critical success factors for strategic sourcing, strategic supplier evaluation criteria, and stakeholder collaborations.

First, Hult (2002) and Kotabe and Murray (2004) state that sourcing can influence the competitive advantage and business performance of a company. Narasimhan and Das (1999) empirically support the positive influence of strategic sourcing on manufacturing flexibilities, as buyers can increase manufacturing performance and reduce costs through strategic sourcing. Khan and Pillania (2008) present the key dimensions of strategic sourcing with empirical validation, where partnerships, flexibility, supplier selection and trust are essential. The authors provide evidence for the importance of strategic sourcing, and its positive correlation with the company's performance. Su et al. (2009) analyse how strategic sourcing and supplier selection influences competitive advantage and business performance. The study supports that the supplier selection process has an impact on gaining a competitive advantage, and strategic sourcing positively influences business performance. Furthermore, Chiang et al. (2012) show that strategic sourcing and strategic flexibility have significant influences on the agility of supply chains. The determination of strategic sourcing by strategic purchasing, supplier development, internal integration and information sharing has a greater influence on a firm's supply chain agility than flexibility.

Second, there are several papers on critical success factors for strategic sourcing Table 1 presents an extract on the critical success factors. It reveals that before Year 2000, strategic sourcing was mainly driven by cost reduction and better management of suppliers. Between 2000 and 2010, developing strategic supplier partnership is widely acknowledged as the key factor. Flexibility, forward-looking and information integration are being emphasized for the strategic sourcing after 2010.

<Insert Table 1 about here>

Third, there are several papers published in the area of strategic supplier evaluation criteria as summarised in Table 2. It indicates that the key criteria and their priorities have changed alone with the time and business environment. Nevertheless, cost (price), delivery time and quality are always the key criteria for the supplier evaluation. To meet the latest challenge of dynamic market, numerous criteria have been taken into consideration, such as companies' financial performance, flexibility in service and production capability, and risk management.

<Insert Table 2 about here>

Fourth, there are several studies on stakeholder management and collaboration in strategic sourcing. Spekman *et al.* (1999) suggest organisations to establish commodity teams across functions to avoid independency of functions. Such a cross-functional process leads to enterprise-wide alignment of supplier selection criteria and a jointly agreed category strategy. Kocabasoglu and Suresh (2006) support the view of internal collaboration with other functions, and uncover its importance based on their manufacturing survey. Cox et al. (2007) and Schneider and Wallenburg (2012) argue that sourcing function has to collaborate better within the company, especially with marketing or sales. Chan et al. (2007) and Hartmann et al. (2008) point out that multi-stakeholder perspectives must be appropriately considered in a strategic sourcing supplier selection process. Otherwise, additional risks would occur and directly affects organisation's reputation, brand value and reliability. Ho *et al.* (2011) propose that internal stakeholders and their requirements must be considered in the strategic supplier evaluation process such that the supplier selection is aligned with the business strategies. Kern *et al.* (2011) empirically proved that the successful management of three stakeholder groups (suppliers, internal clients, procurement and supply management staff) significantly contributes to enhance sourcing performance in terms of cost, delivery, quality, and flexibility. Foerstl *et al.* (2013) proved that cross function integration in sourcing enhance the firm performance according the data collected from 148 companies.

The literature review highlights several research gaps. First, adoption of strategic sourcing varies across the industry. However, there is no study that demonstrates strategic sourcing processes in specific organisation and industry along with associated issues and challenges. Additionally, according to authors' knowledge there is no study that demonstrates country specific practices. Second, the identification of critical success factors of strategic sourcing for specific organisation, industry and country are also rare. Additionally, the understanding of how organisations cope with critical success factors from the company perspective and adapt those within their strategic supplier selection process is undiscovered. Third, although supplier selection criteria has been analysed in prior research extensively, there are very little researches on supplier selection criteria for strategic sourcing. Fourth, strategic alignment within organisations and across functional departments has not been analysed in depth yet and potentially completely depended on individual departmental strategies (i.e., the competing goals of sales, marketing, research and sourcing). Finally, there is limited research based on qualitative research to understand the "why and how" questions, where the interview can comment and show applied management tools in regard to strategic sourcing. This study bridges the above knowledge gaps.

3. Methodology

This research adopts a case study approach considering twenty small to large companies from the electronic manufacturing and construction industries in Germany and the United Kingdom. We selected the research method with the goal to better understand and evaluate the organisations' state of practices of strategic sourcing with "why" and "how" questions (Eisenhardt, 1989; Yin, 2009). Furthermore, the selection was supported by the fact of the explorative stage of research in strategic sourcing in the construction industry as well as to better understand how companies react to recent risk events as a consequence from the financial crisis and supply shortages in the electronics sector. Finally, case study research allows a more in-depth evaluation of reasons through open-ended questions, allows the interviewees to explain actions and behavioural causes, and allows the observation of formal and informal processes (Miles and Huberman, 1994). The multiple case-studies also allow a within industry and across industry as well as within and cross-country comparison of cases.

3.1. Research framework

The conceptual framework in Figure 1 presents the foundation for this research. First, there are different maturity levels in industries, which have a direct influence on the role of strategic sourcing within an organisation. This maturity impacts the degree of the professionalism of the sourcing function. Compared with manufacturing companies, construction companies are more laggard and do not applying the state-of-the-art tools and methods in sourcing (Van Weele, 2010).

Second, the sourcing function has to play its critical role to understand the success factors being important for the organisation. In addition, these success factors need to be aligned with the strategic supplier evaluation criteria as well as the requirements of internal key stakeholders. Finally, the structure and guidance of the framework enables the sourcing function to improve their sourcing decisions and ensures the alignment with corporate goals across functions to minimise supply chain risks, which will improve business performance and competitive advantage.

<Insert Figure 1 about here>

3.2. Case selection

The country selection is primarily determined by the research gap in specific countries and its economical and geographical characteristics. First, there is limited research in qualitative cross-country evaluation of strategic sourcing practices in Germany and the UK.

Second, Germany (No. 4) and the UK (No. 6) are within the world largest countries and dominant in Europe (World-Bank, 2014). Third, Germany is in central Europe and known as transit country and has strong export quota, whereas the UK on an island and is though exposed to supply chain risks.

The electronics manufacturing and construction industries were selected. The electronics manufacturing industry is highly exposed to Asian markets and has to cope with global sourcing, cultural changes and lean supply chains. The electronic component crisis led to significant risks for companies, where the lead times for certain parts increased from a few days to months. In addition, the product life cycles become shorter and the electronic components change frequently, which leads to an additional risk exposure in single-sourcing strategies and products design. The construction sector is highly dependent on tight scheduling and project management. However, it utilises a network planning structure instead of an assembly line approach. Furthermore, the scope, services and complexities differ from the manufacturing of products. Typically, the spend distribution is high and often reach millions of Euros, which leads to a higher bargain power of buyers. The site management or during the bidding process the specification and designs are set, which limits the bargain power with suppliers if the project starts. The case selection is presented in Figure 2.

<Insert Figure 2 about here>

The company selection is based on purposive sampling, which is a common and accepted procedure in qualitative research (Monczka et al., 2011). This research is based on twenty cases (ten by industry and country), which is a solid foundation for case study research (Eisenhardt, 1989; Rossetti and Choi, 2005). The criteria are shown in Table 3.

<Insert Table 3 about here>

3.3. Case overview

The companies vary across countries in revenues, number of employees, strategic and operational context and the sourcing organisation. Furthermore, the companies target different markets and structure their operations based on a domestic, regional (Europe) or global focus. Table 4 shows the overview of the twenty companies.

<Insert Table 4 about here>

The interviews were conducted between September 2011 and November 2012. The organisations and interviewees' characteristics are shown in Table 5.

<Insert Table 5 about here>

The companies involved have different organisational structures, which are dominated either by decentralised sourcing with coordinated purchasing or central sourcing (Figure 3). However, it can be seen that the construction sector is still driven by project or decentralised purchasing organization.

3.4. Data collection

The questionnaire was pre-tested and peer-reviewed by three researchers and one practitioner of sourcing and procurement. The feedback led to final questionnaire change before the research was executed. Organisations were contacted by phone or mail to ask if they are willing to participate in this research project. All interested organisations received an abstract of the research project and its objectives for the interview.

The research design is based on semi-structured interviews to elaborate the current practices with open-ended questions. To avoid interviewer biasness, closed questions were used for verification purposes. With one exception all twenty interviews were audio recorded with direct documentation of the spoken words. The findings were not summarised. Instead, the interviewees' entire answers were used for coding purposes, and the interviews were conducted in German and English and documented in these languages. A translation from German to English was rejected to avoid translation errors and minimise interpretation bias. In this context, the researcher used his language skills to code them. The coding structure and definition is in English. During data reduction, and to summarise central elements, the German cases were translated into English. For the data analysis, inductive investigation, coding and data reduction was used. For the analysis and documentation a database and software NVivo 9 © was used. Case studies were coded in accordance to country and industry as shown in Figure 2. There is a combination of two letters for country (DE=Germany, UK=United Kingdom) and two letters for industries (CO=construction, EL= electronics manufacturing). The numbers represent each case, which has been classified randomly. The coding was reviewed within the researchers' group. The strategic supplier evaluation criteria were structured and analysed by using descriptive statistics.

3.5 Data analysis

The empirical analysis is mainly based on an iterative and inductive process of reading, coding, and interpretation of the transcribed interview notes of twenty case studies (Yin, 2009). First, the coding structure was defined, stored in the NVivo Software and linked to the relevant text section. In the analysis phase, a query can be executed to analyse the case

studies specifically to a semantic code. In this research, the coding structure was based on the research dimensions of the questionnaire. The majority is therefore descriptive. For organisational codes, attribute fields were used in NVivo. The applied structure and first level hierarchy is based on the conceptual framework of this research and should allow for a better understanding of the structure.

4. Findings

This section intends to address five research questions - how the role of strategic sourcing is established within an organisation, which success factors are critical to organisations for enhanced performance, which strategic source evaluation criteria are considered by the organisations, how stakeholder collaboration contributes to strategic sourcing, and is there any misalignment between the organisations' practices and academic literature?

4.1. Role of strategic sourcing

Figure 4 shows that nine out of nineteen organisations see strategic sourcing as a significant and distinct function, but the remaining ten do not have an established strategic sourcing department. The UK organisations dominate the adoption of strategic sourcing, six vs. three. The remaining four UK organisations have plans to establish a strategic sourcing in near future. However, only three German organisations have plans for strategic sourcing. Industry wise, six electronics manufacturing organisations underline the importance of strategic sourcing compared with three in construction sector. It is revealed that based on the highly decentralized organizational structure in the construction industry in both the countries, the integration of a strategic sourcing function is challenging.

The interview findings further reveals that the role of strategic sourcing has changed over the past five years and became more important for organisational performance with enhanced management support. At UKCO1, the importance is obvious *"[...] if I'm the CEO, if sourcing wouldn't be that important to my company, I wouldn't give you money to build a supply chain department". "Sourcing in general has gained more management attention, but the strategic sourcing became particularly relevant as the board saw the impact sourcing could have on revenues"* (UKEL1). Case UKEL3 highlights the change of the function and its increasing importance due to changing operating models: *"I mean a fundamental role in our company, as we are primarily and increasingly a kind of an outsourced manufacturing model, i.e. that we're pushing more and more of the assembly and testing of the products*

externally". The challenges and organizational capability is a key burden. The management of DECO5 understands that the company has reached a significant size, where the implementation of a sourcing function makes sense. The company size is the biggest challenge for DEEL2, and is the reason why strategic sourcing remains unestablished. Instead, the strategic sourcing approaches are managed as part of the daily business. *"We do not have a 100% strategic sourcing. It does not make sense, if we focus on our company size. There are three functions: project sourcing, series sourcing and strategic sourcing. But the role did change over the past three years and the strategic work-load increased up to 50% […]"*, states DEEL2. DEEL4 works on the implementation of a corporate strategic sourcing role within the holding organisation, although the decentralied structures will be more bundled. UKCO5 is going through a restructuring process; the corporate strategic sourcing function has been already designed and the strategy developed. Further structural changes, and the recruitment of highly skilled people, have started (UKCO5).

Three companies do not have a strategic sourcing department. DECO2 highlights that a strategic sourcing department is not planned: *"The work of strategic and transactional is really mixed together. It does not work if one employee only works strategically."* Although the major workload is still transactional focused, the strategic direction is developed by the CPO and this guidance is relevant to the buyers (DEEL3): *"We do not differentiate between strategic and transactional. Though, the strategic guidance will be developed by me, what we need to do, which suppliers we develop, etc."* Finally, and surprisingly, UKCO4 use a different approach: *"The size of the organisation we are, we have actually probably gone the other way."* From centralised purchasing, the company has reverted back to project organisation and transferred the sourcing to the project level.

<Insert Figure 4 about here>

Based on our empirical case-study research, we propose the following propositions for the importance of strategic sourcing.

Proposition 1a: Strategic sourcing is still in a nascent stage. Although the role gained importance in the past, strategic sourcing is not established in every organisation.

Proposition 1b: The UK organisations have more strategic sourcing functions compared to Germany and therefore have a strategic advantage

Proposition 1c: Construction companies are still in a laggard maturity stage of adopting strategic sourcing due to lack of integration of strategic sourcing with other organisational functions.

4.2. Critical success factors

The case studies (n=20) show that quality, supplier relationship management (SRM), and strategy alignment are the three most important success factors in the next ten years (Figure 5). Quality is obviously vital across industries and countries because several organisations highlight that quality is a major critical success factor with raising customers' expectations. The collaboration and partnerships with key suppliers will gain importance in the future. The interviewees think that the networks and partnerships will determine the competitive advantage of an organisation. The third most important factor is the alignment of sourcing strategies with corporate goals, which directly relates to the collaboration with multiple stakeholders within an organisation company. The need to achieve this particular alignment has gained management attention in sourcing function.

<Insert Figure 5 about here>

Table 6 shows the top critical success factors in both countries. Product quality dominates specifically in Germany (90% of the organisations), which is due to the historic "made in Germany" branding a. *"Quality is a given, but the key topic. If you buy cheap, but you do not have quality, you will destroy your brand"* states DEEL5. On the contrary, the UK organisations regard continuous improvement as the dominant factor (80% of organisations), which is also focusing on quality but from a management perspective including processes. UKCO2 points out: *"Continuous improvement, I think that goes through everything we do, we just need to keep getting better at it, if you got a period of ten years, then if we could do that then we will be doing okay."* Similarly, UKCO3: *"It is important to do and improve the things over and over, and the company will be able to improve margins and quality"*. UKEL3 highlights the need for constant improvement: *"If we stand still, we're going to fall further behind. So, you know, that's, I would say, mandatory on each business."*

<Insert Table 6 about here>

Table 7 shows the top critical success factors in both industries. Quality is regarded as the most important factor in electronics manufacturing industry because of increasing customers' expectations. DEEL1 highlights the recent changes: *"Quality is very important to us, because the requirements to quality as well as technical availability of machines of the end customer is worldwide constantly increasing. [...] We are more and more involved to meet the quality requirements of our customers with a zero-defects rate."* UKEL5 also states that quality helps *"retain and enhance competitiveness"*. Similarly, quality regarded as the most important factor in construction industry. DECO4 has a different, automotive-inspired, approach in their assembly line for prefabricated houses: *"We work in accordance with the*

Porsche system, and this will be more and more important. We are on the way to meet the, let's say, zero failures." UKCO2 emphasises that *"Quality, we need it right first time. That just goes and that has always been the main driver. Quality."* UKCO3 states that *"Quality is paramount because that's what our customer wants. Customers are always right. Customer service is key."*

<Insert Table 7 about here>

The study of critical success factors across country and industry reveals the following proposition.

Proposition 2: Product and process quality is the most critical success factor for both electronics manufacturing and construction industries in Germany and the UK.

4.3. Strategic supplier evaluating criteria

The interviewees were asked to rank fifteen criteria, which were identified from the literature. Eleven out of twenty organisations completed this survey using the appropriate scale, whereas the remaining responses were excluded due to incompleteness. Table 8 shows that price/cost/finance, performance of the supplier, and risk are the three most important evaluation criteria. The price is still a dominating criterion for supplier selection and is also relevant to the selection of strategic suppliers. Performance of the supplier is regarded as the second important criterion. Some organisations, especially in the construction sector, heavily rely on the suppliers' performance. Risk is ranked third. This implies that the organisations consider risks more seriously in their strategic supplier selection process.

<Insert Table 8 about here>

Tables 9 and 10 show the top three strategic supplier evaluation criteria in both countries and industries, respectively. Coincidently, financial factor, such as the suppliers' product price, costs and payment terms, is the most important criterion. The price *"speaks for itself"* (DECO3) and DEEL1 points out that *"it is a key premise to be competitive"*. It is an extremely important factor for DEEL2 and UKCO2, and the *"right price, I guess for us, if the price isn't right, the rest starts to tail away"*, states UKCO3. Additionally, UKEL5 points out that *"Price, cost, finance. Why that has to be part of a contract. We need to have it."*

<Insert Table 9 about here>

<Insert Table 10 about here>

The study of strategic supplier evaluating criteria across country and industry reveals the following proposition.

Proposition 3: Cost/price/finance is the most important strategic supplier selection criterion for both electronics manufacturing and construction industries in Germany and the UK.

4.4. Stakeholder collaboration and management

Moses and Åhlström (2008) argue that many sourcing functions operate independently and the internal collaboration is weak. In this research, we try to identify the degree of collaboration, especially in the process of strategic supplier evaluation. Eight out of twenty organisations see the internal customer buy-in as essential within the sourcing processes and Table 11 presents the findings and quotes. The electronics manufacturing organisations treat engineering and R&D as their key stakeholder groups, whereas the construction organisations have a broader stakeholder group and focus on multiple functions. Nevertheless, other crucial functions such as sales or marketing and operations are not specifically mentioned within the interviews. There does not exist significant country deviation.

The proposition that derives from the above is:

Proposition 4: The internal collaboration and stakeholder management is essential to execute an appropriate strategy, however, the current focus is on limited stakeholder groups and must be developed into an integrated and regular exchange to support corporate goals and objectives.

4.5. Strategy misalignment

There is a key difference between what organisations believe is a critical success factor for their business and how they execute their strategic supplier evaluation and selection. The case study organisations across industries and countries identify the most critical success factor as quality, and they tend to collaborate with engineering and R&D as key stakeholder groups in order to address quality and specification requirements. However, quality and specification are never the most important evaluation criteria for their strategic supplier selection. Instead, their supplier selection process is primarily based on price, cost, and finance. Therefore, if organisations intend to become quality leader as per their selection of critical success factors, but adopt supplier selection on the basis of cost/price, there would be serious strategic misalignment. The last proposition that arises from the above is as follows.

Proposition 5: Organisations must align their critical success factors with their sourcing strategy and execution practices in selecting strategic suppliers.

5. Conclusions

To our best knowledge, this is the first multiple case study comparing two industries and two countries on strategic sourcing adoption and execution. There are several research findings that can fill the literature gaps. Although many scholars see the need of strategic sourcing and its positive impact on organisations' performance and business impact (Kocabasoglu and Suresh, 2006; Chiang *et al.*, 2012), this research highlights that strategic sourcing is still an emerging function within electronics manufacturing and construction organisations in Germany and the UK. This study also reveals that adoption and practices of strategic sourcing in the construction sector is less mature than in the electronic manufacturing sector in both countries. Strategic sourcing is being more frequently adopted in the UK than in Germany.

This study reveals that the critical success factors for business performance and their priorities vary across organisations, industries and countries. This study highlights the importance of differentiated perspectives of industries and countries, when it comes to strategic supplier evaluation criteria. It seems that the generalization of strategic supplier evaluation criteria (Ho *et al.*, 2010) does not generally apply and organisations within a specific industry focus on certain industry specific criteria. This research also highlights a potential gap in critical success factors and its misalignment with strategic supplier evaluation criteria. Albeit the importance of a strategic supplier should be considered from long term perspective to support the competitive advantage of organisations and improve business performance. Surprisingly this study reveals that majority of the case study organisations focus on price and financial metrics for strategic supplier selection, which is quite misaligned with their strategic intents. Finally, this research demonstrates the current state of stakeholder management and its involvement in a sourcing process. It reveals that engineering and R&D have been widely considered as the primary stakeholders in the sourcing process, whereas other critical stakeholder groups are ignored, such as sales or marketing, operations, and so on.

The practical contribution of this research is also significant. Based on our research framework and findings, practitioners should adopt strategic sourcing and consider it as an important function within their organisations in order to increase their business performance and competitive advantage. The framework also provides guidance for the execution of strategic sourcing. Specifically, the strategic sourcing function should consider organisation specific critical success factors while adopting and executing strategic sourcing, align the strategic supplier evaluation criteria with the critical success factors, and actively collaborate

with key internal stakeholders so as to capture the strategic success factors and relate them to the evaluation criteria. By doing so, the evaluation criteria are related to the strategic intent of organisation and the supplier selected can achieve the business objectives.

The major claim against the qualitative findings is typically based on personal biases and peculiarity, which is particularly the case if there is only one interviewee participated within one organisation. However, there is always a risk of interviewee bias, which cannot be excluded. The researcher has to believe in the interviewees' responses and the research design that the findings are validated with different questions and through examining the overall situation. Besides, the research design was based on questions with a high degree of subjectivity, which supports the qualitative study and the research objective of deep understanding of how companies apply strategic sourcing and presents the current situation.

There are several possibilities for extending knowledge in the area of strategic sourcing. First, this research can be replicated in other countries and industries. Besides developed countries, it is worth of comparing developed and developing countries on the adoption and execution of strategic sourcing. Second, longitudinal studies should be carried out to examine whether the adoption and execution of strategic sourcing add value to an organisation and influence the competitive advantage and business performance. Finally, this research shows that organisations in different countries behave differently, and cultural differences between the UK and Germany were noted. Therefore, it would be interesting to understand how the cultural backgrounds of managers or chief procurement officers influence strategic sourcing and its direction.

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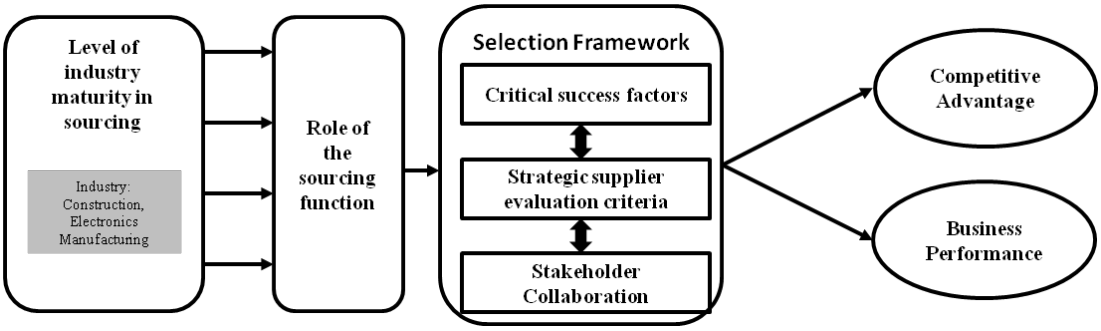
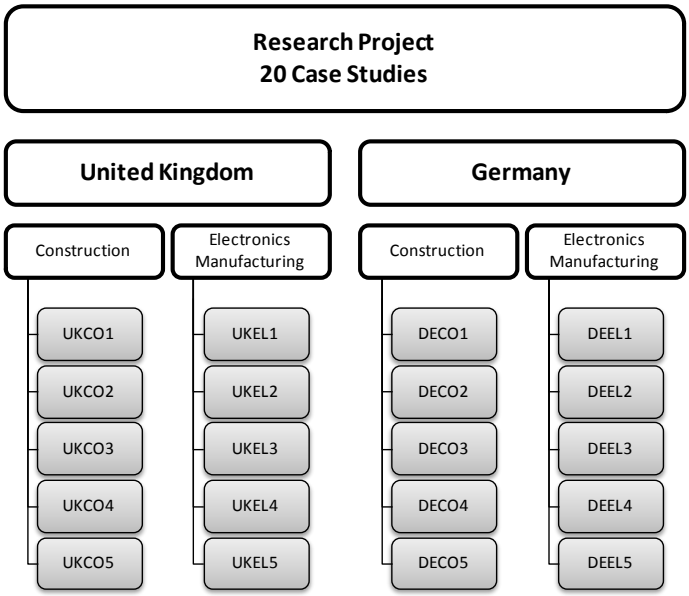


Figure 1 - Conceptual Framework



Coding: UK/DE = Country, EL/CO Industry, 1..5 case number

Figure 2 - Research Project Case overview

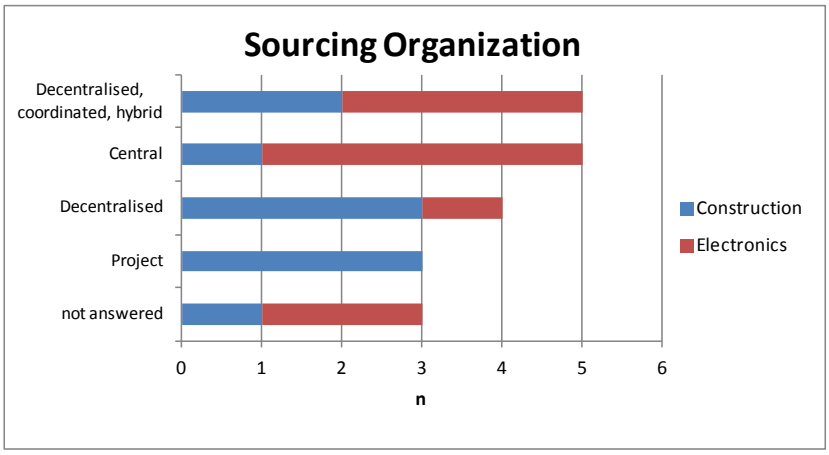


Figure 3 - Sourcing Organization

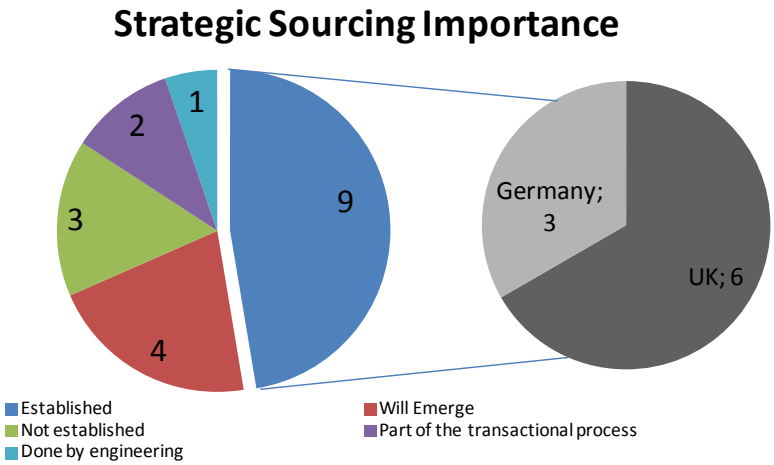


Figure 4 - Strategic Sourcing Importance

Figure 5 - Critical success factors across countries and industries

Table 1

A summary of critical success factors for strategic sourcing.

Authors	Identified critical success factors
Anderson and Katz (1998)	Total cost of ownership, sourcing process excellence, annual plan, develop requirements, devise sourcing strategies, procurement materials and services, evaluate suppliers, and manage supplier relationships.
Narasimhan and Das (1999)	Buyers can increase through strategic sourcing, the manufacturing performance and reduced costs. Suppliers should have strong delivery, consider volume-change-response capabilities and focus on modification response. Furthermore, supplier involvement is a key element.
Kocabasoglu and Suresh (2006)	Status of purchasing, internal coordination, information sharing with key suppliers and key supplier development. The authors argue to empower the sourcing function with relevant tools to make strategic decisions and to manage the supplier relationships. Furthermore, the cross-functional team collaboration should be improved with sales or R&D departments.
Chan and Chin (2007)	The 14 success factors have been grouped to a) visionary leadership in strategic sourcing, b) supplier management system and c) continuous improvement. Most important to least important factors: people management, linking sourcing strategy to corporate strategy, supplier evaluation and selection, system improvement, supplier collaboration, supplier development, supplier monitoring, sourcing strategy, learning organisation, process improvement, leadership in strategic sourcing planning, competitive analysis, proficiency focus, life cycle costs.
Khan and Pillania (2008)	Strategic supplier partnership, sourcing flexibility, supplier evaluation and trust. Empirical justification of the importance of strategic sourcing and supply chain agility and the impact on organisational performance. Strategic partnerships are the most important factor when it comes to stability and effective demand and distribution.
Chiang *et al.* (2012)	The researchers conclude that strategic sourcing and strategic flexibility are significant influencing factors for the agility of supply chains. Specifically, strategic sourcing being determined by strategic purchasing, supplier development, internal integration and information sharing has a greater influence on a firm's supply chain agility than flexibility.
Su (2013)	a) sourcing's long-range plan is reviewed and adjusted to match changes in the company's strategic plans on a regular basis, b) sourcing's long-range plan includes developing relationships with key suppliers c) top management of the company emphasizes the strategic role of sourcing function

Table 2

A summary of strategic supplier evaluation criteria.

Authors	**Identified strategic supplier evaluation criteria**
Verma and Pullman (1998)	Cost, quality, lead time, on-time delivery, Flexibility of changing order
Oly Ndubisi *et al.* (2005)	technology, quality, cost and delivery performance
Su *et al.* (2009)	Supplier selection: product cost, product quality, delivery dependability, delivery speed
Ho *et al.* (2010)	Quality, delivery, price/cost, manufacturing capabilities, service, management, technology, research & development, finance, flexibility, reputation, risk, relationship, safety
Kar and Pani (2013)	Product quality, delivery compliance, price, production capability, technological capability, financial position, e-transaction capability

Table 3

Purposive sampling criteria

Criteria	**Definition**
Country:	The countries defined: UK and Germany
Industry/Product:	Construction according to the SIC code (construction of buildings, can be a master contractor). Manufacturing of electrical equipment for industrial customers (motors, generators, control apparatus, electricity distribution, batteries, lighting, etc.)
Company cluster: Medium and large enterprises	Based on the definition from the European Union, the targeted companies should be medium and large enterprises. The criteria are: Medium: 50–250 employees and a revenue of 10–50 million Euro; Large: above 250 employees and 50 million Euro
Revenue	> 10 million Euro
Employees	> 50
Production site	The company must have a production/construction site in Germany or the UK
Function	The target audience is the sourcing department. The interviewee should be the chief procurement officer or an employee in sourcing (e.g., commodity leader)

Table 4

Overview of cases

DECO1	DECO2	DECO3	DECO4	DECO5
The company is a large enterprise and serves public and industrial clients with project development, turnkey solutions, real estate management and facility management combined with services. The markets served vary from power, infrastructure or operations of infrastructure projects with financial management.	The company has broad offerings: building, turnkey solutions, civil engineering, underground construction, building renovation or pre-casting of elements. Furthermore, the company offers real estate services.	The primary business of the company is the services, product and turnkey solution provision with a focus on interior fit-out, facade construction and insulation engineering. The product range covers facade, steel, glass ceilings and industrial scaffolding.	The company serves private clients with prefabricated houses. The house can be selected from standards or references or can be custom-made. The company produces around 700 houses per year.	The company develops large projects for industrial clients. Primary activities are: project development, project management, general contracting and construction services. Furthermore, the company manages the properties, the facility, assets, centre and park houses. The company is general contractor for clients or develops and operates own properties
DEEL1	**DEEL2**	**DEEL3**	**DEEL4**	**DEEL5**
The company is a one of the competent solution providers for automation, installation, drive and control systems technology. The company produces electronic motors and drives, and automation systems based on its own engineering.	The company is a competent solution provider for automation, installation, drive and control systems technology. It serves all industries from automotive and aerospace to consumer goods.	The company is a global company with multiple sites and is one of the leaders in diagnosis and measuring systems for rotating components across industries.	The company is a solution provider in communication and radio control systems covering engineering, equipment and support across multiple industries.	The company provides the global automation markets and is a leading developer and manufacturer of electrical equipment such as sensor, barrier, fieldbus technique and positioning systems.
UKCO1	**UKCO2**	**UKCO3**	**UKCO4**	**UKCO5**
The company's core competency is in construction and construction consulting with integrated services across the full property and infrastructure life cycle. Despite the construction delivery, the company offers consulting services in project, facility and cost management.	The company has several offerings in the area of construction of buildings and infrastructure. The offering covers design, construction through project finance and lifetime asset management. Furthermore, it offers services in facility management, energy and infrastructure.	Morgan Sindall is the leading UK construction and regeneration group in the public and private sectors. The offerings range from construction and infrastructure projects, through investments, urban regeneration, fit-out restructuring projects and affordable housing.	The GB Group provides a broad range of services. They offer construction, development, energy, IT and management services across a variety of sectors. The company further specialises in care, student accommodation, residential, education, hotels and leisure.	Lend Lease is an international group, which operates as an integrated services provider around the globe. They offer the whole construction life cycle starting with development, investment management, project management & construction, and asset & property management for property and infrastructure.
UKEL1	**UKEL2**	**UKEL3**	**UKEL4**	**UKEL5**
The Seaward Group is the leading company in electrical test equipment. The company designs, manufactures and serves low and high-voltage markets, as well as the solar market.	The company designs and manufactures portable electric test and measuring equipment for high and low voltage. Although the company has a global footprint, the organisational structure is local to meet local customer requirements.	The company is a world leader in providing measurement and sophisticated communications and data solutions for gas, electricity and water customers.	The company is an integrated electronic manufacturing service provider of custom-made solutions for cable looms, cabinets and boxes. Furthermore, the company offers a range of services, from electronic component sourcing to supply chain management.	The company is a leading provider of high-technology tools and systems for research and industry. The company serves all industries, from agriculture to chemical and textiles.

Table 5

Company and interviewee characteristics

	n	Minimum	Maximum	Average
Revenue	19	37 Mil. €	8,123 Mil. €	1,594 Mil. €
Employees	16	265	58,312	6,595
Interviewees				
Experience in current position (years)	16	2 years	29 years	8.5 years
Experience in sourcing in sum (years)	13	3 years	36 years	17.7 years

Table 6

Top critical success factors by country

United Kingdom	Germany
1. Continuous improvement (8) 2. Delivery dependency (6) 3. Product cost (6) 4. Profit (6) 5. Quality (6) 6. Sourcing strategy aligned with corporate goals (6) 7. Supplier relationship management (6)	1. Quality (9) 2. HR topics, talent, employees in sourcing (7) 3. Sourcing strategy aligned with corporate goals (7) 4. Supplier relationship management (7) 5. TCO (7)

Table 7

Top critical success factors by industry

Construction	Electronics
1. Quality (8) 2. Supplier relationship management (8) 3. Profit (7)	1. Quality (7) 2. Sourcing strategy aligned with corporate goals (7) 3. Supply flexibility (7)

Table 8

Strategic Sourcing Supplier Selection Criteria

Rank	Strategic supplier selection criteria	Sum of ranks
1	Price, costs, finance	27
2	Performance of the supplier	47
3	Risk	51
4	Specification, product complexity, quality	52
5	Delivery process with lead-times and supply continuity	65
6	Strategic sourcing fit with internal strategy	75
7	Supplier relation and integration	92
8	Competitive advantage over competitors	95
9	Supplier production capability	96
10	Own capabilities and resources (make vs. buy)	104
11	Customer / demand of own company	108
12	Supply market characteristics (bargaining power)	112
13	Processes and automation, transaction costs	120
14	Economic environment	136
15	Geography of the supplier	140
	n=11; DECO2, DECO3, DEEL1, DEEL2, UKCO2, UKCO3, UKCO4, UKCO5, UKEL2, UKEL4, UKEL5 Scale 1–15 (1=most important)	

Table 9:

Top three strategic supplier selection criteria by country

United Kingdom	Germany
1. Financials (3.0) 2. Risk (3.1) 3. Supplier performance (3.9)	1. Financials (1.5) 2. Specification/ Quality (1.5) 3. Supplier performance (5.0)
n= UK 7, DE 4 - mean values from a scale of 1 to 15, where 1 is the most important and primary factor	

Table 10

Top three strategic supplier selection criteria by industry

Construction	Electronics
1. Financials (2.8) 2. Supplier performance (3.0) 3. Risk (3.8)	1. Financials (2.0) 2. Specification (4.4) 3. Delivery process (4.8)
n= UK 7, DE 4 - mean values from a scale of 1 to 15, where 1 is the most important and primary factor	

Table 111

Stakeholder groups from interviews

Case	Interview Quote	Relevant Stakeholders
DECO1	The internal involvement of other departments is a real topic, because we are very technique (engineering) driven. However, if you focus on other topics as well with a broader focus such as risk management, you need to involve functions such as Treasury or Compliance.	Functional management, engineering, project manager, treasury, compliance
DECO5	The involvement of functions is very important, because if you consider the long and critical path of a project, you will need the functions with their knowledge and experience.	Functional management, internal customers
DEEL2	I see the exchange between sourcing and R&D as critical and essential. It must be more active and both departments need to identify saving potential. This will be more critical in the future	R&D
DEEL3	The involvement of other functions is very critical, because we are very engineering focused.	Engineering
DEEL4	The involvement of the sourcing functions must be at the early beginning of the process; for complex goods & services too. This situation was not given in the past and the sourcing function was purely processing purchase orders. If you focus on R&D we can suggest preferred modules or preferred and preselected parts, the developer can select from and which are approved by sourcing. A kind of bouquet.	Functional management, engineering, R&D
UKCO2	Internal customer buy-in, for the reasons I mentioned to you for it needs to be something that all departments are involved in the supply chain process, and so they need to buy-in to strategies that are developed, and also to contribute towards it as well.	Functional management, internal customers
UKCO5	"Internally the business must support the global sourcing process and that the internal customer has a bind as to this new model and that's very key for us. Because that's all around the fact that as we put these people to work, they have to know that the business is actually fully supportive of their requirements."	Functional management, internal customers (mainly engineering, project manager)
UKEL1	"Internal customer buy-in, there, I would say it's sort of, in the past, we've had issues with our engineering department that if we were basically promoting one's supplier and they want to deal with another supplier sometimes, you sort of get pulled into different directions. "	Engineering

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