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EXPLORING MARKETING AND RELATIONSHIP SOFTWARE SMEs: A MIXED METHODS APPROACH

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a mixed methods approach**

Abstract

Purpose: The aim of this article is to develop an understanding of marketing and customer relationships in software SMEs using a mixed methods approach.

Design/Methodology/Approach: The methodology combined qualitative research methods along with quantitative Adaptive Conjoint Analysis (ACA). Qualitative methods included two case studies of SMEs in the software industry which was supported by participant observation of both SMEs. In order to ascertain detailed customer perceptions and expectations of their software supplier, 17 semi-structured interviews were conducted with the software firm's customers. The interviews subsequently informed the Adaptive Conjoint Analysis (ACA) which was chosen as an analytical tool to establish quantitative hierarchy of relevant attributes identified at the qualitative stage of the study.

Findings: Marketing in software SMEs is dependant on effective relationships between the SME and its customers and these relationships should be based on providing a quality software solution, understanding the customer requirement and professionalism. Other marketing tactics that are used to improve customer perceived credibility include forming alliances and partnerships within the technology sector.

Originality/Value: This combination of methods has made it possible to explore marketing practices within software SMEs alongside exploring the centrality of customer relationships. Therefore the findings contribute to the knowledge of marketing in software SMEs and customers' decision-making processes when purchasing software.

Practical Implications: Software SMEs should proactively develop relationships with prospective as well as current customers and strive for a balance between customer orientation and innovation by involving the customer throughout the development of the software solution. This

pragmatic approach has provided applicable results due to insight into management cases complemented with industry expectation of software product and service delivery.

Keywords: Mixed methods, Software firms, Marketing, Customer relationships

**Exploring marketing and relationships in software SMEs:
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1. Introduction

There is a lack of studies pertaining to the area of marketing in technology SMEs (Harrison *et al.*, 2004; Hausman, 2005). However the increasing economical importance of such firms (Harris, 1988; Keeble and Kelly, 1988) suggests that focus should be placed upon research which can offer practical marketing guidance to SME managers who struggle to market technologically innovative solutions. This study focuses on the software industry, specifically micro firms who offer customised software solutions to business customers. The challenges here are that software products are characterised by a high degree of complexity and intangibility thus the benefits are often difficult to communicate to customers (Moen *et al.*, 2003). Also small, innovation based technology organisations need to survive competition with large, resource-rich companies with well established brands and international reputation (Kennedy and Keeney, 2009). The importance of customer relationships in this context is evident (Helander and Ulkinemi, 2006; Ojasalo *et al.*, 2008) as SMEs must attempt to customise a solution to address a specific business need, making communication with, and understanding of the customer vital. Therefore a mixed methods design combining both qualitative and quantitative methods was employed in this study with the aim of investigating both the company and customer perspective, and to achieve enrichment as well as triangulation of findings. Mixed methods research takes a pragmatic approach to capturing knowledge and although not a commonly used method, it has seen an increased rise within business research (Coviello and Jones, 2004; Hohenthal, 2006). It is therefore deemed a suitable way of investigating and understanding marketing practices as and when they happen in an organisational environment.

The objectives of the study are as follows:

¹ The authors wish to thank Professor Jenny Rowley for comments on an earlier draft.

- To gain an understanding of the marketing practices adopted by software SMEs, in particular the relationships with their customers;
- To develop insights into the expectations of software customers and to identify the key attributes which customers value in the software supply relationship;
- To contribute inductive findings related to marketing practices in software SMEs using a mixed methods approach and highlight the benefits of combining qualitative and quantitative methods.

The article is structured as follows: Previous literature on marketing in SME software technology firms is firstly reviewed. Then, a detailed outline of the mixed methods approach is given followed by a presentation of results and analysis along with a discussion of marketing practices and customer relationships in SME software firms.

2. A summary of previous literature

SMEs are recognised as significant sources of innovation, and particularly in technology sectors innovation can be the most powerful means for growth and development (Cooper and Park, 2008). However little attention has been directed towards the marketing of software SMEs (Alajoutsijarvi *et al.*, 2000; Helander and Ulkuniemi, 2006; Ojasalo *et al.*, 2008). The few investigations conducted point towards the benefits of developing relationships, networking and alliances in this sector. Helander and Ulkuniemi (2006) and Ruokonen (2008) consider the marketing of software as requiring a relational competency, viewing businesses which develop tailored software to be inherently relationship and service-oriented, and for that reason a deep understanding of both the customer's business and the technology is key (Hedaa and Ritter, 2005). In the software sector relationships with existing customers are necessary for not only generating future revenue but providing further business opportunities (Ruokolainen and Makela, 2007). Whilst word-of-mouth is prevalent in the sector (Jones and Rowley, 2009), lasting relationships with current customers facilitate a clearer understanding of customer requirements (Borg, 2009) and learning how end-users use the software (Ahmed and Capretz, 2007).

Furthermore, the complexity of the software and the perceived risk of purchase mean that effective long-lasting relationships are paramount for creating mutual value and can enhance the performance of firms (Caceres and Paparoidamis, 2007). However, little research has been conducted into the purchaser's view of the relationship and their engagement with firms (Pinnington and Scanlon, 2009).

A study by Ojasalo *et al.*, (2008) suggests that cooperation with a bigger and trustworthy actor in the market is key to strengthen the SME's marketing strategy, particularly in respect of marketing communications and developing and strengthening customer relationships. Other researchers also identify business alliances and network relationships as vital in the SME software industry. In particular, software SMEs are noted for seeking partnership opportunities in order to share resources and capabilities (Jones and Rowley, 2009). Marketing in SMEs is often largely based on the owner-managers personal contact networks (PCNs) and how he or she can entrepreneurially leverage resources for the SME firm, factors indentified in the SME marketing and entrepreneurial marketing literature (Carson *et al.*, 1995; Collinson and Shaw, 2001). Related studies of networking in high technology industries have also highlighted the importance of locally-embedded networks, which supports the development of high tech regional clusters (Hendry *et al.*, 2000; Van Geenhuizen, 2008).

Another difficulty facing small start-up software organisations in the business-to-business (B2B) market is getting the first customer reference, which provides the organisation with credibility in the eyes of potential new customers (Ruokolainen, 2008). The importance of relationships with existing customers is hence supported as a means of future revenue and further business opportunities (Ruokolainen and Makela, 2007).

3. Methodology

This study adopted a mixed methods design, with a combination of qualitative and quantitative methods applied sequentially. The following sub-sections describe the research design, process, each method and data analysis.

3.1 A mixed methods design

A mixed methods approach was deployed combining qualitative and quantitative methods at different stages of the investigation. Historically, the positivist approach has been favoured in certain fields such as management and especially marketing, however as mixed methodology takes a more pragmatic and realistic view of data (Teddlie and Tashakkori, 2009), this was considered an appropriate way to investigate real life marketing practice. A mixed methods approach is considered superior to single research designs as it can simultaneously address a range of exploratory questions, it can provide stronger inferences, triangulation (Silverman, 2010) and it provides the opportunity to research a greater assortment of divergent views (Teddlie and Tashakkori, 2009). In this study, the aim was to investigate SME marketing practices in software firms and specifically the development of relationships between the SME and its customers. This meant that a single method would be unable to capture the complexities of customer expectations, and owner-managers' approach to developing relationships with customers within a B2B context. The mixed methods approach has previously been used to study SME marketing (Bradshaw *et al.*, 2008; Harrigan *et al.*, 2008), branding studies (Arora and Stoner, 2009) and supply chain relationships in the software industry (Pidduck, 2006), the benefits of which were reported as complementary and expansive perspectives captured, and a thoroughness and breadth of research achieved. However, the use of mixed methods approaches in marketing studies is still limited (Hanson and Grimmer, 2007).

The very nature of mixed methods involves combining both quantitative and qualitative data with the purpose of gathering both objective and subjective points of view at different stages of the investigation. Such an approach provides a holistic view of the research area in its contextual environment (Gilmore and Carson, 1996) and can capture an in-depth understanding of

managerial decision making over an extended period of time (Gilmore and Coviello, 1999). A combination of different data collection techniques can accommodate flexibility and variety in the research design, and more importantly it allows researchers to choose the 'best' possible methods to investigate the specific issues (Gilmore and Coviello, 1999). Combining both qualitative and quantitative methods also helps to off-set each other's limitations (Milliken, 2001) as qualitative methods are often criticised for being difficult to generalise whilst quantitative studies are criticised for lacking depth (Hohenthal, 2006). Indeed, Das (1983 cited in Amaratunga *et al.*, 2002) states that "qualitative and quantitative methodologies are not antithetic or divergent, rather they focus on the different dimensions of the same phenomenon".

One issue in mixed methods research is the epistemological tension between quantitative and qualitative data as quantitative data is viewed as synonymous with positivism and qualitative data with interpretivism. In view of different dimensions being applied to the nature of knowledge, the question is how to integrate or draw all the data to generate insights? (Bryman, 2007). In this research design, these tensions did not arise due to the sequential nature of data collection (Cresswell, 2009; Teddlie and Tashakkori, 2009).

3.2 Research process

This mixed methods research process consisted of two sequential stages: the first stage was qualitative and involved observing two case study organisations and conducting interviews with the customers of those organisations. The purpose of the interviews was to inform the second, quantitative stage of the study: the design of an online questionnaire that used a conjoint analysis tool. This follows Creswell (2009)'s 'sequential exploratory' design whereby qualitative data collection is conducted firstly to explore the issue in detail, then followed up with quantitative data collection which enables the studying of a larger sample. The design also mirrors Morse (1994)'s QUAL → quan multimethod approach which is driven by an inductive theoretical thrust. In terms of priority, all methods had equal importance in order to achieve a

fair and holistic representation of the dyadic relationships between the SMEs and its customers, and to better understand the marketing activities of software SMEs.

3.3 Case study research and observation of firms

In order to explore the marketing practices of software SMEs, two case studies were investigated. The first SME was observed for three months before it went into liquidation after six years of operation, whilst the second SME was investigated over a period of two and a half years. Using this qualitative method was important for capturing the thinking and practices of participants (Sparrow, 1999), and enabled an investigation of real-life events by exploring a full variety of evidence: documents, artefacts, interviews and observations. Case studies have previously been used for exploring SMEs where issues with marketing tend to be sector specific (Bonoma, 1985; Chetty, 1996; Perry, 1998; Romano, 1989) and have been used to observe technology SMEs (Partanen *et al.*, 2008; Ruokolainen, 2008, Westerlund and Svahn, 2008).

Both cases were selected purposively; based on the fact that both operated within the B2B sector and offered customised software solutions. They were also based in the same technology incubator building in the North Wales area and both were of similar size in terms of employees. The research framework used was a combination of Eisendhart (1989)'s theoretical framework and Yin (1994)'s case study design. Eisendhart's framework was deemed suitable due to its flexibility thus adjustments were sometimes made to data collection depending on company operations or to take advantage of special opportunities in a given situation. Throughout the case study process, a consistent focus was placed on searching for cross-case patterns between both SMEs. Moreover Yin (1994)'s recommendation of collecting empirical data to test hypotheses was followed by conducting an online survey using conjoint analysis, which is described below.

Detailed observation of both cases was conducted as the researcher was immersed within both SMEs for an extended period of time. Observing both SMEs helped in gaining a realistic view of marketing practices, to capture and understand the SME's marketing decisions, to explore the

development of relationships between the SME and prospective customers and to evaluate the employees' attitudes towards management and customers. Throughout the investigation the researcher had full access to both firms and their employees and often accompanied the SMEs and their employees to customer meetings, marketing events and conferences, providing a comprehensive view of the SMEs' attitudes and approaches to marketing.

3.4 Semi-structured interviews

In order to explore the dyadic relationships between the SMEs and their customers, semi-structured interviews were conducted as a means of exploring the customer's experiences and expectations of their relationships with the SMEs. Semi-structured interviews have previously been used to explore marketing in SMEs with the aim of gaining an understanding and meaning whilst allowing flexibility and an element of structure (Gilmore *et al.*, 2001; O'Donnell, 2004). The interviews were also used to inform items for the quantitative online survey stage of the methodology by surfacing the key attributes of the relationships and to offer elucidation on the essence of these key attributes. Altogether 17 customers of both companies agreed to be interviewed. The customers' organisational positions ranged from IT Manager and Programme Manager to Managing Director, the aim being to target the person responsible for software purchase in each organisation.

3.5. Online survey using conjoint analysis

Conjoint Analysis is a multivariate technique which was originally designed to ascertain consumer preferences for various products and services by examining the trade-offs consumers make during the decision making process (Hair *et al.*, 2006). There are other methods to determine attribute importance weights, the most direct being to simply ask people which attribute is important. The problem is that respondents usually indicate that all attributes are important. In conjoint analysis, the respondent is asked to make trade-off judgements (Aaker *et*

al., 2001). Therefore, assuming that products and services are made up of various attributes, conjoint analysis seeks to establish the relative importance of each product attribute and attribute level by finding the utility that consumers attach to each attribute. It therefore provides a substantial insight into consumer preferences while maintaining a high degree of realism (Hair *et al.*, 2006). In this case, it was used to determine what attributes are most important to prospective customers when deciding on a software solution, giving software SMEs a better idea of how to develop relationships and satisfy their customers. It was also selected as a suitable method for an overall pragmatic approach to the study.

The semi-structured interviews resulted in a long list of attributes which customers deem important when entering into a relationship with a software supplier. However as it was necessary to prioritise these attributes, conjoint analysis was selected to prioritise the attributes as it is a more realistic approximation of consumer purchase decisions. Conjoint Analysis is an indirect method of asking prospective customers about the relative importance of attributes and therefore avoids the problem of consumers saying one thing and doing another, thereby reflecting their actual behaviour (Green *et al.*, 2001). Mohr *et al.*, (2005) provide a rationale for the application of conjoint analysis in the technology sector, and support is provided for using conjoint analysis in new product development (Kang *et al.*, 2007). Conjoint analysis has also been applied in the research of technology SMEs in exploring strategy development and product offerings (Schmidt and Gary, 2002).

Subsequent screening of the initial list of attributes resulted in 12 independent attributes that customers deemed most important when selecting a software supplier (See Table 1). These attributes constituted the variables which would then be inputted into the conjoint survey. Between two and four levels for each attribute were defined and used as measurement items (e.g. for 'Communication' the levels would be 'Structured communication' and 'Ad hoc communication'). The specific conjoint methodology applied was Adaptive Conjoint Analysis (ACA) (1987) of Sawtooth Software. In the first, self-explication stage of the ACA procedure respondents expressed their preferences and ascribed importance ratings to individual

attributes. Next they were asked to indicate preferred profiles and perform graded paired comparisons based on varying combinations of the attribute levels.

Table 1: Attributes identified from interviews

1	Software Quality
2	Professionalism
3	Understanding of Requirement
4	Software Functionality
5	Expertise of Supplier's employees
6	Service
7	Trustworthiness of the supplier
8	Price
9	Relationship
10	Communication
11	Bilingual Capability
12	Supplier Office Location

The ACA was selected as it was a computer assisted solution, with direct data input system which can handle a large number of attributes (up to 30). Another advantage of ACA is its ability to 'adapt' to each respondent's answers as he or she goes along, and capture the areas of greatest interest. The composition of questions asked varies per respondent and assumes dynamic approach with active, explicit competitors as opposed to static assessment of pre-defined product profiles. Other than the ACA procedure the survey involved gathering information about the role of respondent, size of organisation, industry and software purchasing behaviour. The survey was made available online with purposive sampling targeting Wales market oriented companies. The sampling frame was created by compiling a list of companies using directories such as The Strategic Wales (Top 300 organisations in Wales) and The Wales Index. The decision makers responsible for software purchase were identified by telephoning the organisations and a link was then e-mailed to the relevant respondents. A reminder e-mail was subsequently sent resulting in 256 surveys being completed.

3.6 Data analysis

To correspond with the research design, data analysis followed a sequential approach as the design of the conjoint analysis emerged from the analysis of the interviews (Teddlie and Tashakkori, 2009). An inductive content analysis was also conducted on the interview transcripts (Miles and Huberman, 1994) and further analysis was conducted by using text mining software to scan and analyse the transcription documents. This helped to keep the data condensed and concise, which is valuable when presenting data from multiple methods (Hohenthal, 2006).

The quantitative data was analysed by estimating the part worth utilities at the total sample level (aggregated data) with Ordinary Least Squares. In order to include individual differences, the Hierarchical Bayes (HB) (Allenby *et al.*, 1995) model was used to estimate the parameters. A cluster analysis was then used as a complementary technique to conjoint analysis (Laukkanen, 2007; Murphy *et al.*, 2004; Odekerken-Schroder *et al.*, 2003) to establish whether there were any natural taxonomies in the data.

4. Results and discussion

The following sub-sections discuss the findings from the qualitative and quantitative stages of the study.

4.1 Results from case study research and observation: The company perspective

The case study and observation of both firms resulted in number of emerging themes illustrating their marketing practices. Both firms suffered from the marketing difficulties experienced by SMEs in general and included a lack of resources, limited finance and lack of marketing expertise (Carson *et al.*, 1995; Simpson and Taylor, 2002). Marketing decisions of both SMEs tended to be made based on instinct and personal preferences of the owner-managers, as opposed to a strategic and logical assessment of the environment (Chaston, 1997). However, decisions often had to be made quickly and were based on what information was available to the SMEs at that time. Consequently, both firms seemed to conduct instinctive and trial and error styles of

marketing as they endeavoured to try different marketing approaches. Thus, the marketing was often fragmented, and it was both reactive and proactive (Fuller, 1994). Reactive marketing was apparent in the sense that an opportunity would present itself in the form of an invitation to tender, or by identifying imminent opportunities via networking with personal contacts (Gilmore *et al.*, 2001; O'Donnell, 2004). However, marketing was also proactive in the sense that SMEs made consistent efforts to develop relationships and tried various marketing activities such as attending technology exhibitions, conducting PR activities around software product launches and innovation awards, and networking (Carson *et al.*, 1995; Collinson and Shaw, 2001). With regards to the software offering, both SMEs faced market uncertainty and buyer's reluctance to commit to purchase due to anxiety regarding non-standardised products and anxiety relating to functionality of the product. It was evident that in this sector, the endorsement of their product by one customer meant that it was easier to attract the second customer (Ruokolainen, 2008). The importance of listening to customer needs and requirements was highlighted in both firms, particularly when developing bespoke solutions (Helander and Ulkuniemi, 2006). This was even more important as customers sometimes did not know exactly what they wanted, or did not know how to articulate what they expected from the actual software product, therefore the development of a prototype, or examples of previous solutions proved helpful in marketing bespoke software.

Effective co-operation and communication between Marketing and R&D personnel within the software SMEs proved key to efficient marketing practices as one SME seemed to value technical knowledge more than marketing knowledge, supporting the literature proposing that spending on R&D in the technology sector is regarded as more important than spending on marketing (Ko, 2005). Therefore a balance between innovating new solutions and retaining a customer orientation was crucial, supporting Berry (1996)'s study which found that innovativeness is associated with cultures that emphasise participative decision making, communication and power sharing.

The marketing practices of both firms corresponded with some of the literature on the marketing of software (Alajoutsijarvi *et al.*, 2000; Easingwood *et al.*, 2006). Tactics witnessed included collaborating with complementary organisations and forming alliances. The suggestion that software companies tend to run a business based on projects was true in both case studies, but neither case had developed into a ‘productised’ company, which is arguably key to sustained growth (Alajoutsijarvi *et al.*, 2000). Although one SME deemed it necessary to aim towards a productisation strategy in the long term, their success was due to their ability to provide solution services which matched customer needs (Hedaa and Ritter, 2005). In contrast, the second SME did not succeed in developing long term relationships with key customers, hindering their ability to attract new customers.

4.2 Results from interviews and Adaptive Conjoint Analysis: The customer perspective

Table 2 presents some of the most frequently cited words from the semi-structured interviews as well as the number of interviews in which they occurred.

Table 2: Text mining results

Words	Frequency	Number of Interviews
After-sales	11	9
Bilingual	85	13
Budget	16	6
Cost	81	12
Deliver	46	11
Experience	37	16
Informal	31	11
Local	42	9
People	69	11
Price	22	10
Professional	38	10

Quality	30	16
Relationship	267	16
Response	71	16
Service	122	16
Support	31	11
Trust	13	7
Understand	91	14
Value	16	8

The text-mining findings showed 'Relationship' and 'Service' to be the most frequently cited words, suggesting that the relationship and service element of delivering software is important to the customer. The words 'Understand', 'Support' and 'Response' were also common and suggest the type of factors that software SMEs should focus upon on when developing customer relationships. However despite the evidence supporting development of relationships, software SMEs should still aim to offer a competitive price as 'Cost' is important to the customer. This is even more pronounced in a competitive sector where SMEs often have to tender for contracts. As this study was carried out in Wales, the text mining findings suggested that customers also expect a 'Bilingual' element to the service.

In the online survey, 256 decision makers responsible for software purchase were surveyed from companies across Wales: 125 respondents were from small companies (under 50 employees), 61 were from medium companies (50-250 employees) and 70 were from large companies (over 250 employees). Roles of respondents ranged from Managing Directors to IT managers and Administrators, and a range of industries were represented including the Public Sector, Chemical/Pharmaceutical, Retail, IT, Manufacturing, Not-for-Profit, Tourism and Business Services.

The results of the ACA survey are shown in Table 3. In order to establish the relative importance of each attribute, mean importances were averaged for attributes using scores obtained for all respondents. They are differences in ranges for each attribute as chosen by a respondent and were therefore dependant on the attribute levels/measurement items. Percentages were

calculated from relative ranges, obtaining a set of attribute importance values that add to 100 percent (Sawtooth Software, 2010).

Table 3 Attribute rankings (ACA average importances)

Software Quality	12.80
Professionalism	11.50
Understanding of Requirement	11.40
Software Functionality	10.33
Expertise of Supplier's employees	9.53
Service	8.80
Trustworthiness of the supplier	8.79
Price	6.82
Relationship	6.10
Communication	5.29
Bilingual Capability	4.63
Supplier Office Location	4.01

In terms of the ACA attributes, 'Software Quality' was considered the most important attribute by prospective customers when selecting software suppliers, therefore the expectation related to product quality cannot be ignored. 'Professionalism' was ranked second indicating that this element of service quality is equally as important as product quality. 'Understanding of the Customer' was ranked third supporting the argument that a dialogue and thus a relationship is necessary when a customised software solution is required (Helander and Ulkuniemi, 2006). Understanding of the customer is arguably even more important when concerning innovation (Hauser *et al.*, 2006) as an innovative solution based on customer needs is much more likely to succeed in the marketplace. The 'Software Functionality' attribute relates to the expectations of the product itself and illustrates the importance of the actual software product which is delivered to customers. 'Expertise of Employees' was also rated as an important attribute, ranking fifth out of the 12 attributes. Past research into the software industry has found that individuals with communication skills, motivation, team spirit and dependability are essential for the success of a software project, which further highlights the importance of 'soft', human elements as well as technical expertise (Isaac *et al.*, 2006). The 'Service' attribute was ranked sixth out of the 12, enhancing the argument that the quality of service provided by software companies is equally essential as product quality. The Service attribute includes after-sales service, which is

imperative to many software buyers in case they are faced with post-purchase technical or user problems. In contrast to the interview findings, 'Price' was ranked eighth out of 12 attributes, implying that it's not as important as the whole service solution including Expertise of Employees, Trustworthiness and Professionalism of the supplier (Agarwal and Rathod, 2006). Despite the support for relationships in the interviews and case study findings, in terms of ranking, 'Relationship' was ranked the ninth important attribute out of 12. Thus initially, one would deduce that even 'Price' is more important than a long term relationship to potential customers. However, when considering the nature of some of the remaining attributes, it can be argued that customers do require a relationship, even if it is not explicitly demanded. Out of the 12 attributes, 'Location' was deemed the least important to potential software purchasers when deciding on a software supplier. This is unsurprising as the latest technology enables communications to be conducted from anywhere, and as software can be delivered and managed remotely.

Although ACA provided a hierarchy of attributes, it did not indicate whether certain classes of respondents preferences' were different to others. Any indication of groups or classes which would differ according to their decision making criteria would be invaluable as SMEs could thus tailor their marketing approach to varying groups. A cluster analysis of the ACA respondents was therefore carried out to supplement the ACA findings.

The clustering of ACA respondents provided additional insights to the ACA findings and four clusters were identified which differed on the basis of Location, Communication, Relationship and Bilingualism. In terms of Location and Bilingualism, the expectation of such attributes was required by one or two clusters, indicating the desired as opposed to the essential nature of these attributes. A long-term relationship was desired by all clusters, although in varying degrees. Structured communication was preferred by three out of four clusters, but ad-hoc communication was preferred by cluster two suggesting that certain customers wish to liaise with their software supplier as and when a need arises.

5. Conclusion

This mixed methods study resulted in a two level analysis of marketing practices in software SMEs and customer perspectives of software SMEs. The qualitative phase involved engagement with two case study firms and interviews with their customers. The key attributes identified in the interviews informed a quantitative study which was conducted using an online questionnaire that used a conjoint analysis tool to obtain responses on the choices that are likely to be made between attributes.

Overall, the findings show that software SMEs' lack of marketing expertise means that marketing is often haphazard and reactive but owner-managers are open to trying out different marketing techniques. Some marketing practices include forming alliances to develop reputation, credibility and reduce the customer's perceived risk of dealing with a small company. More importantly, the findings show that marketing in software SMEs is dependant on effective relationships between the SME and customer and these relationships should be based on providing a quality solution, understanding the customer requirement and being professional.

The findings suggest that software SMEs should proactively develop relationships with prospective as well as current customers and deliver a whole software solution by means of after-sales support, responsiveness and consistent professionalism. However despite customers' apparent willingness to invest in a relationship, the price of the software is still expected to remain competitive. A balance between customer orientation and innovation is crucial for growth and can be achieved by involving the customer throughout the development of the solution and gathering feedback on prototypes. Moreover, the owner-manager should encourage communication between technical and marketing employees.

The combination of methods used in this study proved useful to gain a rich and holistic view of marketing practices and relationships in software SMEs. The qualitative methods allowed the researcher to visualise an accurate picture of the SME's marketing approaches, decision making

processes and development of relationships with their customers, and the online survey strengthened the findings by quantifying the attributes which software customers value from a broader sample. Furthermore, the mixed methods approach provided the freedom to choose methods that were practical and that best addressed the research issues. The use of conjoint analysis in the B2B sector is a significant contribution as it is a method traditionally employed in B2C settings. Thus it widens the use of conjoint analysis whilst the findings contribute to the knowledge of customers' decision-making processes when purchasing software. This study also adds to the relatively limited number of studies in marketing which adopt a mixed-methods approach.

In general, the blend of methods increased the robustness of the results, and weaknesses in one method could be off-set by strengths of another method. However limitations are evident in terms of generaliseability of findings, which is questionable based on the fact that the sample of ACA respondents was not random and the sample was based in one geographical area. Generalisation from two case studies is also difficult, but this study added complementary statistical methods, which is recommended (Bennett and Elman, 2006).

Recommendations for employing mixed methods in researching SME marketing practices in the future include:

- Researchers should immerse themselves in *practice* or real-life settings by working with SMEs as participant observers. This could be achieved via programs such as Knowledge Transfer Programs and Partnerships and close relationships with university networks or independent research networks.
- Other useful methods for researching SME practice include action research, longitudinal studies and grounded theory which can be used to develop knowledge of marketing practice and theoretical frameworks underpinning these actions.

- Further use of electronic research methods would be particularly useful to examine the marketing practices of technical SMEs due to their increasing use of IT networks and infrastructures, blogging and other forms of e-communications.

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