BARRIERS TO E-MARKETING ADOPTION AMONG SMALL AND MEDIUM ENTERPRISES (SMEs) IN THE VAAL TRIANGLE

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Synopsis

Purpose: The purpose of the study is to complement existing literature by examining the relevant barriers contributing to the non-adoption of electronic marketing practices by SMEs in the Vaal Triangle.

Methodology: Primary data was collected using a quantitative research technique with the use of a structured questionnaire as the survey instrument. A total of 168 businesses were selected randomly and visited within the various municipal areas in the Vaal Triangle. These businesses were visited between August and November 2008. Thirty-two small, medium and medium enterprises SMEs refused to participate resulting in 123 usable questionnaires for the purposes of the analysis. Factor analysis was used to examine the robustness of the factor structure using principal component analysis.

Findings: A five-dimensional structure was established comprising a 16 item-scale. The major impediments towards the non-adoption of e-marketing include technology incompatibility with target markets, lack of knowledge, stakeholder unreadiness, technology disorientation and technology perception. The reliability analysis, reflected coefficient values ranging from 0.70 to 0.88 indicating satisfactory internal consistency amongst variables within each dimension.

Implications: By analysing the barriers that inhibit the adoption of e-marketing strategies among SMEs, marketers are presented with recommended strategies and implications on how to approach the challenges presented by Internet technological advancements. Internet capacities of SMEs may be strengthened through nurturing e-marketing awareness and providing adequate information tools through diverse Internet Marketing training programmes.

Originality/Value: SMEs can prove to be a major source of economic growth for many African countries if sufficient guidance and support on how best to overcome the challenges of adopting advanced marketing practices is available.

Keywords: E-marketing, SMEs, barriers, non-adoption, factor analysis.

INTRODUCTION

Owing to the low growth rate of global economies, high unemployment and an unsatisfactorily high level of poverty in countries, the creation of the small and medium sized business sector plays a critical role in economic growth (Vuuren & Groenewald, 2007:269). The SME sector remains one of the most promising economic sectors contributing approximately 30% of the gross domestic product (GDP) in South Africa and over 80% in global economies (Jutla, Bodorick & Dhaliwal, 2002:139). Cronje, Du Toit and Motlatla (2004:6) affirm that SMEs act as a catalyst for economic growth as well as for the development of the arts, human resources, manufacturing and sport sectors. In line with the August report from the Parliamentary Monitoring Group (RSA, 2009), economies can benefit from the build-up of efficient SMEs in order to facilitate the government's plans to create about half a million jobs for South Africans targeted originally for accomplishment by the end of the year, 2009. In this regard, uptake of Internet marketing strategies has the potential to contribute to the exponential growth of the SME sector. However, despite its potential as a marketing tool, actual use of e-marketing has not met expectations (Elliot & Boshoff, 2007:16).

Marketers are able to identify and satisfy customer needs and preferences through monitoring website visitations, e-mails, online surveys and chat rooms conducted on the Internet (Porter, 2001:68). Business

enterprises can develop custom-made products and services that meet the precise needs of consumers and this in turn culminates in high returns for businesses (Zhao, 2005:56). The adoption of e-marketing enables businesses to promote their products and services to the public through advertisements, banner advertisements, e-mails and mobile phone competitions (Chaffey & Smith, 2005:12). Businesses are also better able effectively to serve global markets and to distribute goods and services to customers globally through e-marketing adoption (Harris & Dennis, 2002:18).

This article reviews the relevant literature on the importance of the SME sector, e-marketing and the barriers to e-marketing adoption. In addition, the generic problems regarding the adoption of e-marketing are highlighted.

THE SME SECTOR AND ITS IMPORTANCE

Small enterprises comprise between five and 100 formally employed persons. Employees are employed on a full-time basis. According to the Department of Trade and Industry, a small business is owner managed; registered with local authorities and business activities are conducted from fixed premises (RSA, 2005:5). Medium enterprises constitute between 100 and 200 formal employees (Cronje *et al.,* 2004:5). Such businesses have vast potential of growing into large businesses, should capital injections be obtained. Often they are characterised by a decentralisation of power to a new management layer (Falkena, 2000:25-27) between the SME operator and employees.

SMEs are considered the “lifeblood of modern economies” (Rao, Metts & Monge, 2003:13), creating far more jobs than those created by large businesses, contributing 37 percent to employment in South Africa (Soontiens, 2002:712; Barry & Milner, 2002:316). SMEs provide a variety of goods and services for customers to choose from, some of which might otherwise not be provided by large businesses (Jackson, 2004:6). SMEs act as catalysts for economic growth as well as for the development of the arts, human resources, manufacturing and sport sectors (Cronje *et al.,* 2004:6). Studies conducted by Moodley (2002:37) from a development perspective reported that SMEs are important because of their potential for job creation and distribution of wealth which results in a multiplier effect on the socio-economic activities of a country which in turn creates a multiplier effect on the socio-economic developmental activities of a country (Wrycza & Gajda, 2007).

SMEs are flexible and can also act as subcontractors to most large enterprises in the economy, ultimately leading to equitable distribution of income (Lloyd 2002:8). The Department of Trade and Industry report (RSA:1995) indicates that SMEs provide personalised services and also make a positive contribution to wealth creation in the South African economy. They are breeding incubators for entrepreneurial talent and a testing ground for new products (Chaston, 2000:74). They are agents of change, widely facilitating innovation and competition within various national economies (Barry & Milner, 2002:317).

This sector tends to differ from large enterprises in that they stimulate competition, bring about a diversity of products and services, have less formality in their internal and external systems and possess hands-on managerial style, which facilitates faster decision-making times (Kendall, Tung, Chua, Dennis & Tan, 2001:225).

Despite the concerted efforts by the South African government to eliminate potential barriers to technology adoption through the liberalisation in the telecommunications sector, this growth has not significantly filtered down to the SME sector (Poon & Swatman, 1999:9).

The generic barriers to e-marketing adoption are discussed in the next section.

E-MARKETING AND GENERIC BARRIERS TO ADOPTION

The E-Marketing Association defines e-marketing as "the use of electronic data and applications for planning and executing the conception, distribution, promotion and pricing of ideas, goods and services to create exchanges that satisfy individual and organisational objectives" (Gohary, 2007:4). Burgess and Bothma (2007:397) define e-marketing as a "business's efforts to inform, converse, promote and sell products and services over the Internet".

In knowledge economies, high competition among profit-making businesses is of paramount importance in order to attract customers. Decision-making times and sales cycles are becoming shorter (Ryssen, 2004:48). There is also a need to keep pace with contemporary business requirements in ensuring that marketing's standing as a business essential is closely upheld by all enterprises. This background explains why it is that SMEs should integrate Internet-driven marketing principles into their mainstream business practices.

A review of literature reveals that the adoption of e-marketing varies by industry type (Poon & Swatman, 1999:14) with the public, education and charity organisations being the lowest adopters of Internet technology (Maguire, Koh & Magrys, 2007:39). Global adoption of e-marketing by SMEs has been slowest in the agricultural sector (Sparkes & Thomas, 2001:332). This refutes earlier research findings of Teo and Tan (1998:342) who found that no significant relationship exists between industry sector and adoption of e-marketing.

Businesses in the services sector, primarily the consultancy and professional services, have reported a robust interest in adopting Internet technologies for marketing purposes as their type of business integration necessitates the use of computer technologies as a core activity (Coviello, Brodie, Brookes & Palmer, 2004:15). Websites in the airline, hospitality, software and electronics industries indicate that the adoption of the Internet has been extensive in these sectors (Kalyanam & McIntyre, 2002:468). SMEs specialising in manufacturing products are less likely to adopt Internet technologies as compared with knowledge intensive service organisations such as consultancies (Martin & Matlay, 2001:403; Sadowski, Maitland & Dongen, 2001:90). A majority of manufacturing SMEs are still in the lower stages of e-business adoption because these firms perceive very low levels of benefit from e-business (Ramsey & Ibbotson 2006:317). Technology-intensive industries have reaped the rewards of Internet technology, which are yet to be experienced by traditional marketers (Chan & Swatman, 2000:72). These high-tech firms constitute early adopters of Internet technologies (Fillis, Johannson & Wagner, 2004:182). This is contrary to studies undertaken by Matlay and Addis (2003:323) who assert that there is no connection between Internet adoption and technological content of a business environment.

If a firm has inadequate security procedures or an unrecognised brand name this could jeopardise customers' confidence in the usefulness of the Internet as a trading platform (Durkan, Durkin & Dillen, 2003:101). This is because any online research and purchasing decisions are made solely based on trust (Wagener 2004:39). Inadequate security measures, expertise and financial means to guard against unauthorised access to confidential information by employees and from outsiders and hackers pose a hindrance to Internet adoption (Khan 2007:24-25; Walczuch, Braven & Lundgren, 2000:566).

E-marketing leads to standardisation of products and prices as differences among competitors' products are reduced (Porter, 2001:73). Large firms are also able to encroach onto niche markets, which were traditionally serviced by SMEs because e-marketing significantly reduces transaction costs (Jeffcoat, Chappell & Feindt,

2002:124). These limitations on the part of SMEs have contributed to the significantly low levels of e-marketing adoption. However, the turning point comes when marketers out-compete each other based on information and service quality (Hamill, 1997:306; Elliot & Sewry, 2006:43).

Drew (2003:86) makes the point that the costs of infrastructure, access and adoption of e-marketing have declined to levels where these no longer present a barrier. Adoption is often impeded by information barriers such as uncertainties with respect to the performance of the Internet or the future development of these technologies, within the SME context (Hollenstein, 2004:321).

Some SMEs occupy small niches in the local markets where 'word of mouth' is a guarantee for quality such that the adoption of Internet for marketing purposes may be viewed as an inhibitor for their business communications (Taylor & Murphy, 2004:285).

PROBLEM STATEMENT

The Internet is the fastest growing technology in the world, taking approximately seven years to reach a 25% market share from its conception, as opposed to the telephone that took 35 years, and the television, which took 26 years (Singh, 2002:3). There is little evidence of long-term strategic development of e-marketing technologies within SMEs (Fillis *et al.,* 2004:180). Only 17 percent of the SMEs in South Africa believe that electronic business transactions are critical to their operations (Zaayman, 2003:2). From these current users, considerable variations still exist in their adoption of e-marketing. Some owners of very small businesses may adopt e-marketing as a means of defending their autonomy in business and thus adopt the technologies in a casual and *ad hoc* manner (Gilmore, Gallagher & Henry, 2007:234). This is the current scenario despite ample evidence to suggest that e-marketing can facilitate improved business practices particularly within the small and medium sized business fraternity (Whiteley, 2000:217). Several barriers have been cited in the literature as contributing largely to the non-adoption of e-marketing strategies.

Some small firms may be resistant to embrace online technologies due to perceived risks that include privacy and security issues (Liebermann & Stashevsky, 2002:291). A research conducted in Asia highlighted that globally, SMEs are not prepared to adopt e-marketing as a serious business concept owing to the limited acceptance of online selling by consumers (Lane *et al.,* 2004:10). Findings of Singh (2002:6) further alluded to the fact that customers are reluctant to shop online due to insufficient knowledge and limited trust in the use of credit cards as well as the issue of delivery of online purchases. However, adoption is often impeded by information barriers such as uncertainties with respect to the performance of the Internet or to the future development of these technologies globally (Hollenstein, 2004:321).

In a study carried out by Johnstone and Wright (2004:228) on the barriers affecting the implementation of Internet systems and procedures in different countries, it was revealed that the following were the rankings in order from the most prohibitive barrier to the least of barriers:

- High cost of installing infrastructure; high price of technology, large investment requirements and liquidity constraints;
- Uncertain return on investment (ROI);
- Limited worker expertise caused by a general shortage of highly skilled workers and insufficient training;
- Lack of management vision, support and enthusiasm in the adoption of Internet technology,
- Inability to outsource IT expertise; and
- Bad experiences in the past.

However, these rankings are not consistent across countries. Further research has shown various related issues to be possible inhibitors of e-marketing adoption. Lack of training, capital and understanding of the potential benefits brought about by Internet technology have been cited as key barriers to the adoption of e-marketing by SMEs (Migiro & Adigun, 2005:70). Other studies consider the lack of knowledge as a factor made manifest in a lack of awareness; advice and support or having a staff compliment without the necessary IT skills (Stansfield & Grant, 2003:23; Kohn & Husig, 2006:993). SME owners pursuing unclear business strategies often contribute to their businesses losing sight of the value of adopting Internet technology (Migiro & Adigun, 2005:70). Other researchers have highlighted the absence of a national and international regulatory framework related to privacy and security as a major concern for SMEs not adopting the Internet (Lewis & Cockrill, 2002:199).

PURPOSE OF THE STUDY

The paper seeks to advance the findings advocated in previous studies on e-marketing barriers that exist among SMEs by establishing barriers to e-marketing using a factor analytical approach.

METHODOLOGY

To obtain an objective perspective, a literature study was conducted on barriers inhibiting the systematic adoption of e-marketing as well as an empirical investigation. Primary data was collected using a quantitative research technique with the use of a structured questionnaire as the survey instrument. The rationale for selecting a quantitative study was that it is cheaper, flexible and allows for replication of the research procedure thus enhancing validity of research findings. Quantitative studies possess the rigor and coherence that is necessary for addressing the issues and problems (Malhotra, 2004:137) that underpin the non-adoption of e-marketing by SMEs.

Population and the sample

The historical evidence approach was used to determine the sample size for this research (Zikmund, 1999:320). A sample size of 150 was set and therefore deemed appropriate and feasible for this particular study. This figure is also consistent with sample guidelines from past similar surveys conducted by Upfold and Sewry (2006:5); Beheshti and Sangari (2007:236); Uzoka, Shemi and Seleka (2007:6). The sample constituted small and medium sized businesses in the Vaal Triangle. The target population was restricted to Managers, SME owners, IT specialists, or Heads of Marketing Departments. An appropriate sampling frame was assembled from various lists that included a register from the Gauteng Enterprise Propeller (GEP), the Vaal Triangle business directory as well as SME databases from the relevant municipalities in the region. SMEs were randomly selected from the population so each population unit had an equally non-zero chance of being selected thus allowing statistical inferences to be made (Bradley, 2007:172).

Data collection

Three fieldworkers to conduct the interviews were selected by the researchers based on their ability to understand the concept of e-marketing. These students were screened and selected from a Marketing Research 4 class from a university. They were trained in various aspects of questionnaire fieldwork administration.

Pre-testing was conducted on five academics in marketing and IT fields in order to ensure that the questionnaire met expectations in providing accurate information and to assess whether or not respondents understood the questions correctly. In addition, a pilot study was conducted with 20 SMEs (10 small and 10 medium enterprises). This technique was used as an indispensable aid for developing the final questionnaire.

The views of SME operators and other researchers were taken into account prior to conducting the main survey. Suggestions were taken into account resulting in the compilation of the final measuring instrument. A survey method was used as it a satisfactory means of assessing information about a population with an ease of administration (Zikmund, 2000:220). A total of 168 businesses within the various municipal areas in the Vaal Triangle were selected randomly and visited between August and November 2008. Thirty-two SMEs refused to participate resulting in 123 usable questionnaires for the purposes of the analysis.

RESULTS

The results are described taking into account the composition of the sample in terms of small and medium enterprises, demographic analysis of the data and descriptive statistics explained by the means of the variables relating to the barriers to e-marketing adoption. Thereafter, the factor analytical procedure and extraction of factors is described.

The sample composition

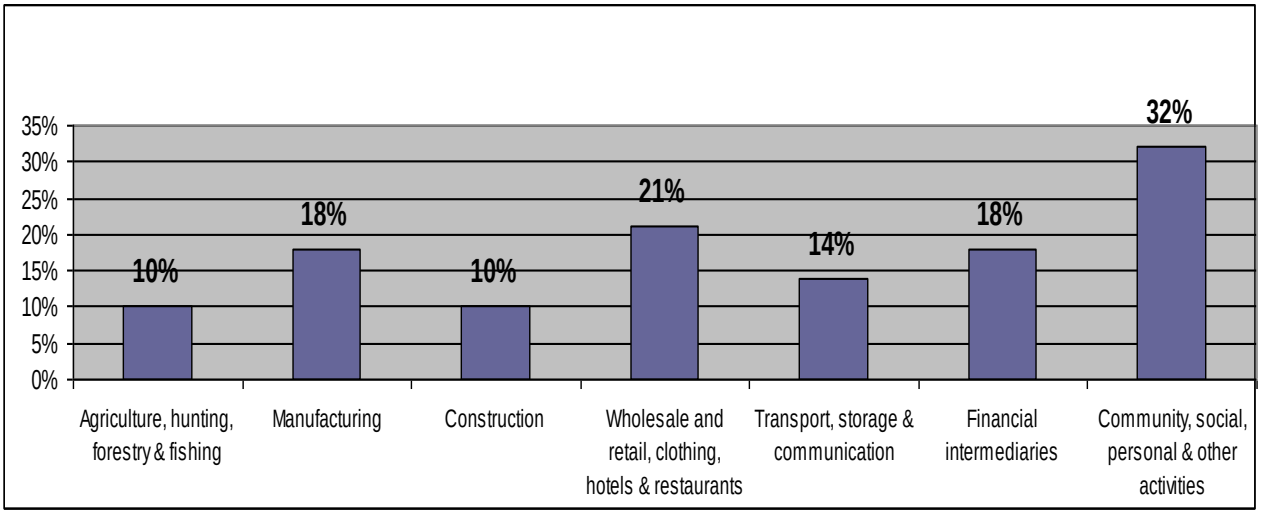
A total of 115 businesses (93%) were classified within the small sector whereas only eight firms (7%) qualified for classification as medium enterprises based on number of employees and annual turnover as shown in Table 1 below.

Table 1 Sample composition

Enterprise size	Number of employees	Annual turnover (rands)	Count (n)	%
Small	Fewer than 100	Less than 8 Million	115	93
Medium	Greater than 100 but less than 200	Greater than 8 Million	8	7
TOTAL			123	100

Demographic data of the respondents was also collected including gender, age and education levels. Of the 123 businesses that were included in the survey, 77 respondents (63%) were males and 46 respondents were females (37%). The largest category of respondents was between 40 to 49 years which comprised 39 percent of the sample (n=48). This was followed by the 30 to 39 years age group which represented 34% of the sample (n=39). 15 percent of the respondents were under 30 years of age, and 12 percent fell in the 50 years and older age category. Seven out of ten standard industry classification (SIC) sectors were represented in the sample. The industry representation of the sample is reported in Figure 1. The majority of respondents comprised the community, social and personal services sectors which constituted 32 respondents (26%). This sector comprises mostly hairdressing, medical care as well as recreational services. The wholesale, retail, clothing, hotel and restaurant business sector comprised 21 respondents (17%) followed by the manufacturing and financial services sectors each constituting 18 respondents (15%). The transport, storage and communication sector comprised 14 respondents (11%) of the sample.

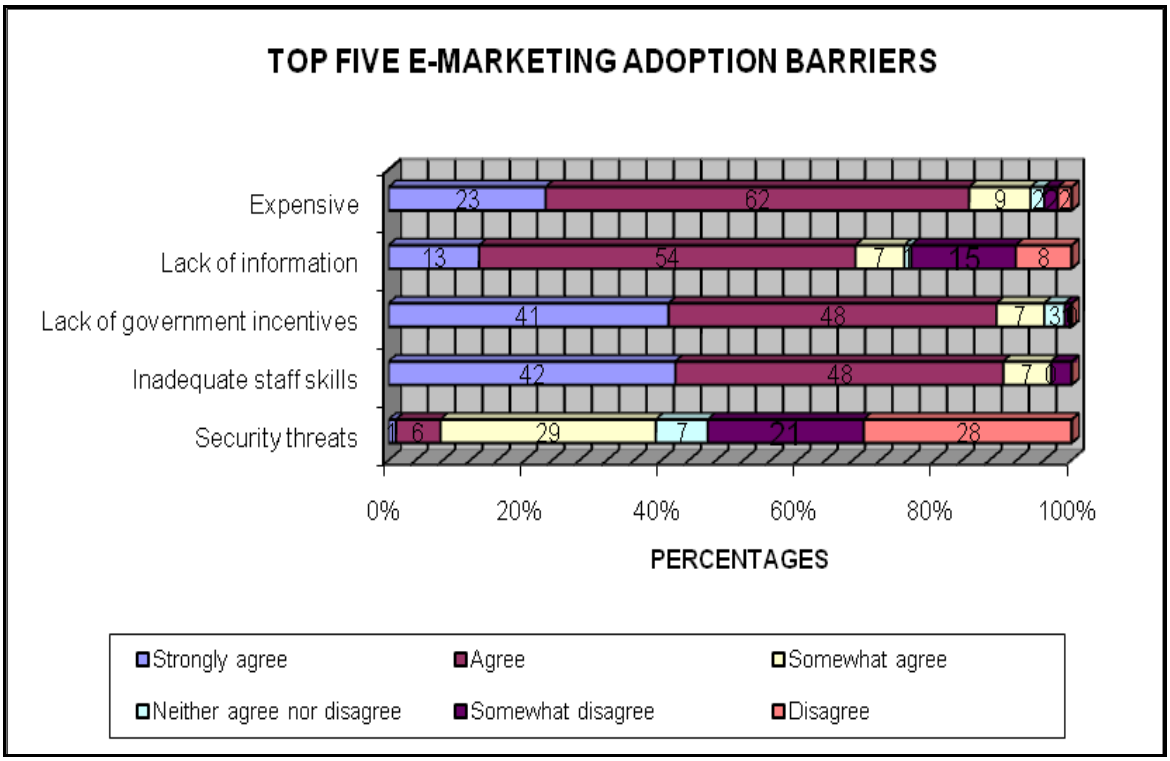
Figure 1: Industry representation of sample



Descriptive analysis on barriers to e-marketing adoption

With the exploratory nature of the study, the data was initially analysed using descriptive statistics. Table 2 reports on e-marketing adoption barriers. On the perceptions of the barriers inherent in the implementation of various e-marketing strategies, respondents were requested to list the top five inhibitive factors of e-marketing adoption. The most critical challenge facing SMEs was identified as the unavailability of resources to implement the systems. Of the 123 SMEs which were surveyed, 23 percent (28 respondents) strongly agreed and 62 percent (77 respondents) agreed to the statement that they find e-marketing too expensive to implement. Furthermore, 29 percent (35 respondents) somewhat agreed with the statement that e-marketing is a security threat to their business. Lack of knowledge,training, advice and support have also been highlighted as being major factors in the adoption process. Approximately 54 percent (67 respondents) of the SMEs cited that they do not know much about e-marketing. In the same vein, 48 percent (58 respondents) somewhat agreed that their organisations do not possess the necessary staff skills required for the complete implementation of e-marketing.

Table 2: Descriptive analysis – barriers to e-marketing adoption



Factor analysis

In addition to obtaining the perceptions on the barriers to adoption of e-marketing a principal components factor analysis was conducted on the twenty-item scale to develop the set of factors that can be classified as barriers to adoption of e-marketing among SMEs. Prior to factor analysis the appropriateness of factorability on the data set was established. Examination of the correlation matrix (strength of linear association among variables) revealed that a substantial number (75%) of the variables were >0.30 which according to Avkiran (1994:14) indicates factorability. The Kaiser-Meyer-Olkin (KMO) and the Bartlett's tests were also applied in order to further determine the appropriateness of the data set for factor analysis. The approximate chi-square was 827.888 with 120 degrees of freedom and significant at $p<0.000$. The KMO value was 0.618 which is considered satisfactory (Malhotra, 2007:615). Both test statistics inferred that factor analysis was justifiable for the data set.

The principal component analysis (initially unrotated) was applied, extracting factors with eigen values greater than one (Malhotra, 2007:617). This procedure extracted factors that were difficult to interpret. Factor analysis with Kaiser Normalisation (varimax rotation) was then applied in six iterations revealing a clearer factor structure with loadings ranging from 0.555 to 0.924 (only loadings of 0.50 were retained in the study). This is consistent with the guidelines of Uzoka *et al.* (2007:7) and Hair, Anderson, Tatham and Black (1992:239) who maintain that loadings of ±0.30 = minimum levels; ±0.40 = important levels and ±0.50 and greater are considered more important.

Item reduction was then undertaken by examining low factor loadings, multiple factor loadings and unstable item-total correlations. Subsequently, four variables were removed from the scale. The standardized alpha was recorded at 0.79 (Overall Cronbach α=0.79) which exceeded the suggested level of 0.70 (Nunnally, 1978:245). Average inter-item correlations were recorded at 0.38 indicating satisfactory correlations among variables. To determine the number of factors to be extracted for use in the study the total percentage of variance was computed and accounted for 68.69% of the total variance in the data. Malhotra (2007:617) recommends that a satisfactory level is for the extracted factors to account for at least 60 percent of the total variance. Factors with eigen values of more than 1.0 were retained (eigen value >1) leading to the final extraction of five factors. Compilation of the scree plot further posited that the scree began to level off after five factors. The final factor structure is reflected in table 3.

Table 3: Rotated factor matrix and psychometric properties of the scale

Variables	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Item-to-total correlation	Alpha if item deleted
E-marketing is too slow	.031	.049	.152	**.924**	.114	.392	.783
E-marketing is disorganized	.158	.054	.097	**.901**	.129	.460	.779
E-marketing is not relevant to the SMEs line of business	**.758**	-.171	.155	.348	.046	.561	.769
E-marketing is not consistent with the size of SMEs	**.833**	.041	.135	.090	-.002	.574	.768
E-marketing is too difficult to manage and control	**.743**	.085	.072	-.103	-.018	.409	.782
E-marketing is only useful for young businesses	-.005	.002	.020	.223	**.811**	.169	.799
E-marketing is just a fashion, a mere buzz-word	.144	.036	.128	.037	**.832**	.269	.791
Few of the business's customers are online	.212	.056	**.831**	.206	.001	.552	.770
Few of the business's competitors are online	.197	-.017	**.879**	.133	.020	.510	.773
Few of the business's suppliers are online	.068	-.003	**.712**	-.018	.104	.309	.791
SMEs do not know much about e-marketing	.243	**.722**	.159	.052	-.236	.345	.788
SMEs lack advice from the government authorities	.228	**.555**	.096	.159	-.342	.303	.789
SMEs lack training and support	-.038	**.813**	-.235	.030	.140	.108	.798
SMEs do not possess adequate staff skills in IT	.027	**.802**	.052	-.051	.227	.260	.791
Our market is locally based so we do not need e-marketing	**.638**	.180	.155	-.089	.175	.444	.780
Our market does not know how to use e-marketing	**.625**	.203	.092	.233	-.027	.499	.775
Eigenvalues	4.11	2.23	1.83	1.44	1.36	**Overall Cronbach α=0.79**	
% of variance	25.71	13.95	11.45	9.02	8.50		
Cumulative %	25.71	39.67	51.13	60.15	68.68		
Cronbach **α**	0.80	0.70	0.78	0.88	0.71		

DISCUSSION OF RESULTS

The discussion of the results are summarized from the descriptive analysis of the top five inhibitors to e-marketing adoption by SMEs and the factor extraction procedure described under the results section.

SME barriers to e-marketing adoption

The study revealed that the essential barriers to e-marketing adoption are:

- costs involved in the implementation of e-marketing,
- lack of information,
- lack of government incentives,
- lack of training,
- inadequate number of knowledgeable staff, and
- security threats.

These findings are consistent with studies conducted by other researchers on Internet non-adoption. Studies undertaken by Purcell and Toland (2004:250) for example, revealed that the determinants of Internet adoption in developing countries vary from those in developed nations. Findings of Uzoka *et al*. (2007:11) affirm that developing nations are mostly affected by factors relating to cost and availability of infrastructure, government support, and complexity of using the Internet as well as perceived benefits of the technologies. South African SMEs still find the cost of installation and maintenance too high compared with SMEs in developed countries (Cloete *et al*., 2006:5; Nannozi & Coertzee, 2006:7). Ramsey and McCole (2005:538-539) argued that those SMEs that did not adopt Internet marketing strategies due to the low level of management and business skills should try and acquire more training. Lack of training, capital and understanding of the potential benefits brought about by Internet technology have been cited as key barriers to the adoption of e-marketing by SMEs (Migiro & Adigun, 2005:70). Other studies consider the lack of knowledge as a major barrier as it is associated with a lack of awareness; lack of advice and support or having a staff compliment without the necessary IT skills (Stansfield & Grant, 2003:23; Kohn & Husig, 2006:993).

Other researchers have highlighted the absence of a national and international regulatory framework related to privacy and security as a major concern for SMEs not adopting the Internet (Lewis & Cockrill, 2002:199). Perceived risks of adopting Internet technology also act as a significant inhibitor. These risks include; privacy, authenticity of information about the products, unknown quality of products, fitting, size, originality of raw materials and policy about exchanges and returns (Jacobs & De Klerk, 2003:11). In another study, Internet addiction, slow connections, Internet credit card theft and the receipt of undesired mail were cited as perceived inhibitors of adoption (Liebermann & Stashevsky, 2002:292). A clear privacy policy can therefore, increase customer trust and confidence in an organisation's practises (Jordaan, 2004:10).

Factor extraction on the barriers to e-marketing adoption

These dimensions were named after a careful examination of the characteristics of the variables under each dimension. Barrier one comprised five variables loading onto it. It was labelled ***technology incompatibility with the target market*** and it accounted for 25.71 percent of the variance and the eigen value for the factor was 4.11. This component describes how a business' technology needs to be well-attuned to the adoption of e-marketing. Lack of congruence with the organisation's size, core activities and needs will ultimately lower the probability of an SME adopting e-marketing technology (Rogers, 1995:224). In addition, technologies should not be too complex to operate or maintain once they have been implemented (Harrison & Waite, 2006:1004). These characteristics of technology are normally considered significant when explaining the rate and pattern of adoption. Combined with this barrier, is the critical absence of an eligible market that poses a challenge to SMEs in their quest to adopt e-marketing strategies (Lane *et al*., 2004:10). Respondents

indicated that their product offerings are restricted to local boundaries (markets) and hence they find it difficult to take advantage of the opportunities offered by the geographically boundary-less forum offered through the e-marketing platform (Ramsey & McCole, 2005:536).

The second barrier accounted for 13.95 percent of variance and with an eigen value of 2.23. This barrier was labelled ***lack of knowledge***. The lack of skills, training, advice and adequate research around the topic of e-marketing adoption has led many SMEs to fail to adopt e-marketing tools. These findings are consistent with studies of Ramsey and McCole (2005:539), and Kohn and Husig (2006:993) who state that the absence of experience and profound knowledge of e-marketing tools will often result in its non-adoption.

Barrier three comprised three variables and was labelled ***stakeholder un-readiness*****.** It accounted for 11.45 percent of the variance and the eigen value for the factor was 1.83. This dimension incorporates the unwillingness of a business' stakeholders to operate online. E-marketing cannot be fully implemented if customers, suppliers and competitors are not prepared to trade on the same platform (Lee & Cheung, 2004:388). This view suggests that SMEs are not prepared to adopt e-marketing as a serious business concept owing to the limited acceptance of online marketing practices by their business partners (Lane *et al*., 2004:10).

Barrier four was labelled ***technology disorientation.*** This barrier accounted for 9.02 percent of the total variance with an eigen value of 1.44 and had two variables loading onto it. The respondents described that the lack of orientation of e-marketing strategies is a challenge in their efforts to adopt online marketing strategies. Studies undertaken by Liebermann and Stashevsky (2002:292) also highlighted slow Internet connectivity as well as high levels of clutter on online forums as being significant inhibitors to e-marketing adoption.

The fifth barrier was labelled ***perceptions of e-marketing****.* This barrier accounted for 8.50 percent of the total variance with an eigen value of 1.36. This dimension describes the views and opinions that are preconceived in the minds of SME operators prior to disregarding e-marketing. Other organisations even view e-marketing as a mere catch phrase, with insignificant return on the amount of investment devoted to its adoption (Simpson & Docherty, 2004:320).

Whilst Johnstone and Wright's (2004:228) ranking is in part encapsulated in this scale, only a few of the items were found to be efficacious within a South African context. This study lends support to the studies undertaken by Migiro and Adigun, (2005:70); Stansfield and Grant (2003:23); Kohn and Husig, (2006:993) that key barriers to the adoption of e-marketing vary according to countries.

Following on from the factor analysis procedure, the study progressed by providing an assessment of the reliability and validity of the research instrument.

RELIABILITY

The psychometric property of the scale, as measured by coefficient alpha (0.79), reflects an acceptable degree of cohesiveness among scale items and provides an indication of the extent to which a set of items are interrelated and internally consistent with each other. Table 3 presents the results of the reliability of the sub-scales. The reliability values ranged from 0.70 to 0.88, with all factors satisfying the benchmark level of 0.70 as recommended by Nunnally (1978:245).

VALIDITY

Content validity refers to items used to measure a construct that are conceptually consistent with the definition of a variable (Scheepers, Bloom & Hough, 2008:11). To ascertain ***content validity*** the instrument was refined during the pre-testing stage where a review of the questionnaire was undertaken by five academics in the Marketing and Information Technology environment after which several changes were made to the instrument. In addition, the questionnaire was pilot-tested with twenty SMEs to ensure that the variables clearly examined the marketing research problem. ***Discriminant validity*** was further assessed through the multivariate technique of factor analysis using Varimax rotation with Kaiser Normalisation. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and the Bartlett's test of Sphericity provided indications that the data was suitable for exploratory factor analysis. The eigen values, total percentage of variance and scree plot were used to determine the number of factors to be extracted. Those factors which loaded on two or more factors (cross-loadings) were deleted. This step of scale refinement assists in improving the validity of the research instrument to more satisfactory levels of discriminant validity i.e. all factors loading on only one factor with no cross-loadings (Dhurup & Mohamane, 2007:69-70). The five barriers were identified by an iterative process of deleting items that did not load higher than 0.50 on any factor thus providing an assessment of ***construct validity*** (all factor loadings of at least 0.50).

RECOMMENDATIONS

In order to alleviate the barriers associated with the lack of knowledge and negative perceptions about e-marketing, it is necessary that formal education and awareness tools be introduced starting from national level in order to avert scant adoption of e-marketing. E-marketing can rarely take off unless companies and individuals are educated about the opportunities offered by Internet related technologies (Stansfield & Grant, 2003:25). Access to computers and the Internet is essential but not adequate without education and training in the effective use of these tools for marketing activities. Therefore, education and training should be initiated to increase the level of information and computer literacy amongst owners and managers of small businesses (O'Toole, 2003:120). This will also go a long way in dispelling negative perceptions that e-marketing is just a marketing buzz word. Stakeholder readiness was rated as the most relevant inhibitor of e-marketing adoption. It was established that many companies have adopted a 'wait-and-see' attitude toward the adoption of e-marketing strategies in the SME industry in South Africa (Cloete, 2006:8). As soon as successful champions emerge (innovators), many companies will be able seriously to consider participation. Furthermore, a lack of knowledge of the particular e-marketing strategies available leads SMEs to be partly ignorant of the particular benefits that can arise through the implementation of e-marketing. In this regard, e-marketing adoption does not add value to businesses if the stakeholders to the small and medium sized businesses are not yet ready to participate on these electronic trading platforms. There is a need to encourage increased stakeholder participation in online marketing platforms, especially for intermediaries and customers through competitions with intermediaries and further education and training for customers and other critical stakeholders on the benefits and convenience of using electronic trading platforms.

Industry players should seek to strengthen the Internet capacities of SMEs through; nurturing e-marketing and examining the feasibility of a local/regional mechanism to promote information sharing and capacity building with a view to enhancing the efficiency and competitiveness of SMEs (Elliot & Boshoff, 2007:15). This will go a long way in correcting the negative perceptions that SME operators have about the adoption of electronic marketing tools in various business practices.

Technology incompatibility, costs of implementation, perceptions and lack of eligible online markets were cited as barriers to e-marketing adoption within SMEs. These barriers and the insecurities brought about by

the dot com crash of 2000; have inevitably reduced the popularity of adopting e-marketing strategies (Cloete, 2003:130). Further research needs to be conducted on how electronic innovations may be taken advantage of, for the benefit of marketing specifically within the small and medium business fraternity at both a local and national levels. This may be done by both academic and industry experts with a view to establishing relevant skills and techniques that may be needed to increase the efficiency of Internet marketing tools.

LIMITATIONS OF THE STUDY

This study adds to the body of knowledge and the growing literature on e-marketing adoption and its barriers. The limited sample size of 123 respondents used in this study indicates that caution is needed in the interpretation of these findings as these results cannot be accepted as completely relevant to other provinces in South Africa or to any other international SME scenarios. The study concentrated on SMEs operating within South Africa, a newly industrialised country, hence there is a possibility that measures of non-adoption in developing and newly industrialised nations may vary from those businesses operating in technologically advanced first world nations (developed countries). The study was conducted in one region only. In order to refine the results similar studies could be conducted in different provinces across South Africa.

It is also possible that there are similar or diverse barriers existing in e-marketing adoption both between SMEs within the same industry sector and between large and public enterprises. It is also important to note that while the five dimensions identified in this study are distinguished as having the greatest impact on e-marketing technology non-adoption, other dimensions may also be important. Future studies with regards to the e-marketing adoption barriers in different organisational settings may provide new insights into adoption patterns.

CONCLUSION

The findings of this preliminary study do provide basic support for a five dimensional structure highlighting the inhibitors of electronic marketing adoption among SMEs in the Vaal Triangle namely, technology incompatibility with target markets; lack of knowledge; stakeholder unreadiness; technology disorientation as well as perceptions. These findings indeed concur with other studies that posit that the non-adoption of e-marketing is multi-dimensional in its causality and that it largely depends on the business sector under investigation (Sparkes & Thomas, 2001:332; Stansfield & Grant, 2003:23; Kohn & Husig, 2006:993). Marketing managers acknowledge that Internet marketing is effective. A study conducted by Singh (2002:8) suggests that organisations are clearly meeting the needs of some markets as Internet-based sales of ± R21 million were generated in South Africa in December 2000. In this regard it may be concluded that a systematic implementation of e-marketing strategies is positively related to overall business success (Morikawo, 2004:174) and SMEs who do fail to implement these systems are set to jeopardize the potential returns of their businesses.

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