Linking firm and managers' characteristics to perceived critical success factors for innovative entrepreneurial support

Jaloni Pansiri and Zelealem T. Temtime
Department of Management, Faculty of Business, University of Botswana, Gaborone, Botswana

Abstract

Purpose – This paper aims to examine perceived critical success factors (CSFs) affecting the performance of small to medium-sized enterprises (SMEs) and their relationship with firm characteristics. The paper also seeks to investigate the interdependence relationship among the perceived CSFs themselves using correlation coefficients.

Design/methodology/approach – This paper is part of a wider study that was designed to investigate the perceived critical success/failure factors (PCSFs) affecting the development of SMEs. The study is based on a review of the literature, which provided a theoretical understanding of both CSFs and firm characteristics. This theoretical linkage was then tested using primary data that were collected through a two-page questionnaire survey of 203 SMEs randomly selected from three cities in the Republic of Botswana. Principal component analysis (PCA) with Varimax rotation was used to reduce the data. Analysis of variance (ANOVA) was conducted to test the relationship between firm characteristics and perceived impacts of selected CSFs, and correlations were used to assess the relationships between the CSFs.

Findings – The study identifies ten sets of perceived CSFs affecting the performance of SMEs; statistically significant relationships between the perceived impact of selected CSFs and firm-specific variables, indicating that the perceived impact of CSFs vary from firm to firm depending on their size, age, industry, and management profile; and statistically significant relationships among the selected CSFs themselves.

Research limitations/implications – The study relies exclusively on a questionnaire as the data collection instrument, and many respondents were unwilling to participate in the survey. Therefore, it took the authors eight months to collect 203 questionnaires. This forced the authors to make some important changes from the original research proposal.

Practical implications – SME managers and advisors should not deal with CSFs individually, but should adopt an integrated and innovative approach to deal with them collectively. This approach should consider SMEs' uniqueness, given that these CSFs are perceived differently depending on firm characteristics. The paper forwards some research and policy implications for designing SME support and promotional interventions.

Originality/value – The paper uses well-established and researched CSFs in the SME literature. To this end, the paper's originality and value lie in the investigation of these factors in Botswana. However, the findings are applicable to most SMEs, since they continue to suffer from the same problems worldwide.

Keywords Entrepreneurialism, Critical success factors, Small to medium-sized enterprises, Botswana

Paper type Research paper

Introduction

Although SMEs have long been recognised as an engine of economic growth in all economies (Bhutta *et al.*, 2008; Wijewardena *et al.*, 2008), they face numerous and complex problems affecting their performance and eventual survival. Pansiri and Temtime (2008) and Temtime and Pansiri (2004b, 2005) observe that although the discovery of mineral wealth has propelled Botswana into the middle-income category, "the country still faces the problem of economic diversification, employment creation, income distribution and poverty alleviation" (Temtime and Pansiri, 2004b, p. 18). Botswana's economy is highly dependent on the mining and beef sectors for its income and on foreign markets for the import of basic goods and services.

Although the government has formulated and implemented different SME promotional policies and programmes in order to diversify the economy and create employment opportunities, the pace of development of SMEs and their contribution to national economic development is minimal.

Most SMEs in Botswana are in their early stages, with more emphasis being placed on short-term survival issues than growth and long-term competitiveness (Temtime, 2002; Temtime and Pansiri, 2003, 2005). The Government of Botswana (1999) estimates the general failure rate for SMEs in Botswana to be over 80 per cent, with over 70 per cent of start-up firms failing in their first 18 months and less than 2 per cent of them expanding their businesses. This has been attributed to several financial, managerial, organisational, environmental and entrepreneurial problems (Temtime and Pansiri, 2004a, b, 2005, 2006a, b). Thus, the current situation of SMEs calls for the need to identify and analyse the most critical factors affecting the performance and development of SMEs.

This paper presents the results of research carried out in Botswana aimed at determining the relationship between firm' and managers' characteristics and selected critical success factors. The study seeks to give an understanding of why Botswana's SMEs are not growing, despite the various policies and financial support provided.

Literature review

This literature review is divided into two broad theoretical perspectives. The first section evaluates problems that are believed to have an impact on SMEs' performance. In doing so, SMEs problems are conveniently divided into:

- external environmental issues;
- internal organisational and managerial issues;
- market and marketing issues; and
- finance and financing issues.

The second part of this review of the literature uses past research findings to link firms' and managers' characteristics to firm performance, and subsequently, to perceived critical success factors (PCSFs).

External environmental factors

Environmental factors greatly influence a firm's strategy. Therefore, it is essential for business executives to have an integrated understanding of the external and internal environments. The external environment is defined as the relevant physical and social factors outside the boundary of an organization that are taken into consideration during organisational decision making. Several studies on environmental scanning and strategic planning (Elenkov, 1997) conceptualised the environment as having several sectors that exist in two-layers:

(1) the task environment; and

(2) the general environment.

The task environment involves environmental elements that are commonly defined to include competitors, suppliers, customers and technological factors. The general environment refers to sectors that affect organisations indirectly and include economic, political, demographic, cultural, regulatory and social sectors (Sawyer, 1993). These sectors are expected to influence the performance of small firms because they differ in uncertainty. Thus, it is critical that small firms be aware of the nature of the environment that they currently face and anticipate facing, and the need to incorporate changes in their strategy formulation and implementation.

Internal organisational factors

These problems are usually labelled as critical success/failure factors as they are internal to the organisation and within its control. These problems need immediate managerial actions and include human resources management, business planning, organising, and directing. The future of small firms depends on the development and maintenance of human resources. As Drucker (1984) noted, SMEs require a few highly competent people, dedicated to the task, driven by it, working full-time and very hard. For many firms, the attraction, development and maintenance of the human resource is a critical success factor. Recruiting new employees is one of the biggest challenges facing small firms, and a key component of organisational success.

Further to this, owner/managers of SMEs are usually close to the operating personnel and activities being undertaken in the organisation. This provides the owner managers with opportunities to influence these operations and activities directly. The organisational structure of small firms is likely to develop around the interest, preferences, and abilities of the owner/manager. Due to its size, a small firm usually does not have many individuals in each specialty. This leaves the business vulnerable. If a key marketing or production individual dies or leaves, the business is crippled, more so because owner/managers do not often take time to develop their subordinates and assistants. Development of employees is costly for small firms, but the cost is often outweighed by the benefits.

Marketing factors

These days it is widely accepted that SMEs are not just "little big" businesses but that they have their own peculiar characteristics which affect the way they operate, and which largely determine their preoccupations and concerns. Owners/managers of most small firms conform to a number of stereotypes, such as being mainly concerned with the problem of the immediate future rather than long-term considerations, being essentially pragmatic as opposed to accepting new concepts, and preferring to tackle problems and decisions themselves and as they occur rather than working to clear procedures and programmes. The implication of this for marketing is that an intuitive approach exists among small firms. SMEs' marketing activities are founded largely on traditional practices and experiences. Any attempt to formulate a marketing plan using recognised marketing concepts would seem to be non-existent in newly established firms. Small business marketing is entirely dependent on the depth of the experience and knowledge of owners/managers. Often, marketing planning activities are limited to planning for "selling" within a narrow industry perspective (Huang and Brown, 1999).

Firms and owner/managers with different characteristics perceive the roles and importance of marketing differently. While some firms adopt effective marketing strategies and techniques, others do not see the real benefits of engaging in marketing their products/services.

Financial issues

Despite the fact that there are many financial institutions extending credit facilities, it is observed that small firms are still generally short of credit (Abdullah and Baker, 2000). This lack of credit has been identified as one of the major factors inhibiting the success of small businesses (Abdullah and Baker, 2000). Many smaller enterprises rarely approach financial institutions when they are short of funds because they are not confident of obtaining bank loans and credits. In addition, their limited experiences with bank officials have done little to change their perceptions of the difficulties and bureaucracies in obtaining credits. Commercial banks are usually reluctant to provide credit facilities to smaller firms because lending to them is less profitable as compared to lending to larger firms.

Lending to small firms also involves high credit administration costs and greater risks. This is especially true when many small firms are typically deficient in equity and acceptable collateral. They are generally considered less credit-worthy, as their incomes are relatively unstable (Abdullah and Baker, 2000). One of the most critical mistakes in small firms is that of starting a business with insufficient capital, which does not allow small firms any room for error or give them the time they need to collect amounts due from customers. Thus, small businesses require a careful and conservative estimate of start-up capital (Haswell and Holmes, 1989).

The question at this juncture is whether firms and owner/managers with different characteristics perceive the impact of financing and financial management in the same way. Firms in different industries, of different sizes, ages and forms or ownership may experience financing difficulties to different extents.

Managers' characteristics and firm performance

Owner/managers' characteristics

Several approaches have been used to link SMEs problems to owner/managers' characteristics. For example, recognising the dynamic relationship between the firm and its operating environment and entrepreneurial characteristics, Keats and Bracker (1988), proposed a conceptual model of SME performance where performance outcomes were perceived as functions of many variables, including individual owner characteristics, owner behaviour and entrepreneurial influences. The model transcends the belief that SMEs are not merely miniature versions of large businesses and recognizes small firms as unique entities. Recently, Bhutta *et al.* (2008, p. 130) found that "education, generation setting up the business, and number of partners have a significant relationship with the health of SMEs". The findings by Bhutta *et al.* (2008) are supported by those of Wijewardena *et al.* (2008), whose study found a strong relationship between owner/manager's mentality and the financial performance of their enterprises.

Furthermore, Weitzel and Jonsson (1989) found that the numerous characteristics shared by failed firms are directly related to personal decision-based characteristics of the owner (e.g. lack of insight, inflexibility, emphasis on technical skills etc), managerial deficiencies (e.g. lack of managerial skills, appropriate management training, and previous managerial experience) and financial shortages (e.g. no accounting background, cash flow analysis, financial records).

An earlier study by Peterson *et al.* (1983) concluded that whatever their size or location, managerial expertise and leadership factors are critical for the survival of SMEs. Similarly Wichmann (1983) found management capabilities to be important attributes affecting SMEs' success. Haswell and Holmes (1989) also studied problems of SMEs in different industries and found that managerial inadequacy, incompetence and inexperience are major problems, regardless of industry. Huang and Brown (1999) found that internal and external management capabilities are major factors contributing to small business failure. Argenti (1976) attributed small business failure to "poor management" and argued that no matter what disaster befalls a firm in the market place, sufficient managerial training, experience and foresight could by definition have avoided it.

Firm characteristics

Studies linking SME problems or critical success factors to firm characteristics are insufficient, and almost inexistent in Botswana. Therefore, this study seeks theoretical explanations of the occurrence of these problems to firm characteristics. Researchers linking firm characteristics and firm strategy have presented mixed findings. For example, Dodge and Robbins (1992) used the organizational life cycle model to argue that the organizational structure in one stage of development of an SME is not the same as that in the preceding or following stage. Thus, with a different emphasis and operating context, each stage of development will have a different set of problems. The other assumption in this model is that what the management of an SME does or does not do with respect to current problems propel the transition to the next stage. Problems may therefore be carried from stage to stage, or may be unique to a particular stage. They argue that greater knowledge of how SMEs evolve and the major obstacles or critical factors faced in various life cycle stages is strongly needed to fully understand their developmental processes and the types of assistance for their survival and growth.

Unfortunately, SMEs' managers do not often see arrival at a particular stage, particularly the decline stage, until it is too late (Pretorius, 2004). This failure is linked to personal decision-based characteristics of the owners or managers and poor management (Argenti, 1976; Haswell and Holmes, 1989; Weitzel and Jonsson, 1989). This raises issues relating to a good understanding by SMEs' decision makers of what is happening externally and internally to their organisations.

Schwartz and Menon (1985, p. 685) found that while firm size did not influence decisions to make CEO changes, larger failing companies that made such changes displayed a greater preference for external replacements than did smaller ones. Miller *et al.* (1998) found relationships between firm size and the comprehensiveness of strategic decision processes and extensiveness of strategic planning. Wincent's (2005) study found that firm size can be an important determinant for firm performance, and for networking inside and outside the SME network.

Katsikeas (1994) found important relationships between firm size, expert involvement and export market experiences. Hendricks and Singhal (2001) found that the degree of implementation of total quality management philosophy and firm performance are significantly related to firm size, capital intensity, the degree of product diversification and firm age. Shergill and Sarkaria (1999) studied 21 industry groups and found strong relationships between firm growth and profitability on the one hand and firm size and industry type on the other hand. Wan *et al.* (2000) studied the relationship between organisational innovation and firm characteristics and found positive and significant relationship between organisational innovation and:

- decentralized structure;
- presence of organizational resources;
- belief that innovation is important;
- willingness to take risks; and
- willingness to exchange ideas.

Pett and Wolff (2003) studied whether top management perceive the North American Free Trade Agreement (NAFTA) favourably or unfavourably and related this to firm characteristics and performance. They found that managers exhibiting favourable perceptions of NAFTA are related positively to differentiation strategy performance, export experience and firm size. Fabling and Grimes (2007) studied the relationship between HR practices and firm characteristics and found that HR practices improve with firm size and firm age; larger firms have better high-performance HR practices than do medium-sized firms, which in turn have better HR practices than smaller firms. Other than start ups, young firms perform better than old firms.

Muranda (2003) studied the relationship between firm characteristics and export constraints in Zimbabwean manufacturing firms and concluded that Zimbabwe's exporters are essentially small to medium-sized enterprises, and that size, experience, and risk aversion are the characteristics that strongly contribute to perceived constraints. Temtime and Pansiri (2005) found significant relationships between internal and external problems of SMEs and firm characteristics (e.g. ownership status, managers' experience and organization's age). Pansiri (2007) found that firm characteristics (sector, turnover, number of employees, and ownership status) were strong determinants of strategic alliance adoption in the tourism sector.

Conclusions of the review of the literature

With the above background, this paper empirically examines the direction and magnitude of relationships between selected small business critical success factors and firm and owner/mangers' characteristics for the purpose of designing innovative entrepreneurial development programmes. In doing this, the paper test two hypotheses:

$H0_1$. There are no statistically significant relationships among the PCSFs themselves.

$H0_2$. There are no statistically significant relationships between the firms' and owner/managers' characteristics, and the PCSFs.

The following section explains how data was collected. Then the findings of the study are presented, and subsequently the conclusions and implications of the study are given.

The survey design

This paper investigates the statistical relationship between selected critical factors and firm, and owner/managers specific demographic variables, as well as the association among the critical factors themselves. To test these relationships, primary data were collected using a questionnaire from 250 randomly selected SMEs from three cities in the Republic of Botswana. Three kinds of data were collected. First, respondents were asked to give specific demographic data regarding their firm, such as firm size, form of ownership, firm's age, etc.

The second part of the questionnaire contained 94 items, largely derived from the existing literature, and respondents were asked to rate the impact of these items on the performance of their firms using a five-point Likert-type scale ranging from 1 (very low) to 5 (very high). The last section of the questionnaire contained open-ended questions on the major problems affecting the performance of SMEs and suggestions on how to alleviate these problems. Of the 250 questionnaires distributed, 221 were returned in time. Since 18 questionnaires were discarded due to incompleteness and a large number of missing values, this report is based on data collected from 203 (92 per cent) SMEs. Both descriptive and inferential statistics were used to present and analyse the data.

Findings

Perceived critical success factors were identified through data reduction (principal component analysis), data purification (Varimax rotation), and factor reliability (Cronbach's α) validation processes (Viviers *et al.*, 2001). Firm-specific demographic variables included firm size, form of business, industry type, managerial experience, respondent status in the firm, etc.

The respondents rated the perceived impact of 94 items on the performance of their business. The 94 items were pre-tested and reduced to 76 items. Using the principal component analysis, a factor analysis with 25 iterations and Varimax rotation was run on the 76 items using the SPSS software, Version 15.0. Items with a factor loading of 0.50 and above were taken as acceptable correlation (Nunnally, 1978). The factor analysis showed that out of 76 items, 70 were loaded onto 12 factors with acceptable factor loading coefficients, and six items were discarded from the study because either they have low factor loading or did not load onto any of the 12 factors. The next step was to test for the reliability of the 12 factors as true representative of the 70 items. As shown by the Cronbach's α reliability coefficients, ten factors satisfied the cut-off point of an α value of 0.50 and were considered perceived critical factors affecting the performance of SMEs. Therefore, the last two factors, as shown in Table I, are excluded from the group of critical success factors as their reliability coefficients are very low (below 0.50; (Cronbach, 1951).

These factors together with the specific items comprising them are perceived by the respondents to be critical for the survival and growth of their firms. For example, the customer relationship factor, which is made up of six related items, must be evaluated and analysed in terms of its components.

Table I.
Perceived critical success factors

Rank	Factor	Code	Items	Cases	α
1	Customer relationships	CRN	6	189	0.87
2	Organisational design	ORD	7	181	0.84
3	Managerial background	MAB	5	198	0.82
4	HRM development	HRD	8	183	0.81
5	Working capital	WCM	7	183	0.79
6	Marketing activities	MKT	7	185	0.67
7	Managerial activities	MAC	5	190	0.69
8	Investment analysis	IAN	7	182	0.64
9	Socio-economic	SOE	8	179	0.63
10	Changes	CHG	4	184	0.51
11	Competitive strategy	COS	4	184	0.39
12	Personal factors	PRF	2	195	0.21

The sample firms were largely small in size, concentrated around the capital Gaborone, and largely owned and operated by men. The majority operate in the merchandising (retail and wholesale) sector of the economy, with very few firms operating in the manufacturing sector. Most of them are established as corporations and sole proprietorships, with the partnership form of organisation being less common in Botswana. Regarding their experience in Botswana, most of have been operating for six to ten years, and the majority are owned and managed by expatriates. The respondents are mature adults, married with an average of two children and over five years of managerial experience. Most of the respondents are employed professional managers or part-owner managers, with owner managers having over ten years of previous experience in the public sector before starting their business. The selected firm characteristics include firm size, firm age, industry type, form of ownership, status, management experience and citizenship.

Hypothesis testing

$H0_1$ states that there are no statistically significant relationships among the PCSFs themselves. A partial correlation analysis among the PCSFs was conducted to test this hypothesis. The correlation coefficients are presented in Table II and the asterisks show level of significance at the 5 and 1 per cent probability levels, respectively. As

Table II.
Correlation among the critical success factors

	MKT	IAN	WCM	SOE	CHG	ORD	HRD	MAB	MAC	CRN
MKT	1.00									
IAN	0.27**	1.00								
WCM	0.18*	0.63**	1.00							
SOE	0.19*	0.160	0.05	1.00						
CHG	0.34**	0.14	−0.00	0.34**	1.00					
ORD	0.19*	0.12	0.06	0.44**	0.33**	1.00				
HRD	0.26**	0.20*	0.21*	0.46**	0.31**	0.52**	1.00			
MAB	0.06	0.02	0.10	0.31**	0.10	0.41**	0.32**	1.00		
MAC	0.29**	−0.01	0.03	0.14	0.06	0.17	0.18	0.23*	1.00	
CRN	0.32**	0.17	0.11	0.15	−0.06	0.14	−0.02	0.03	0.05	1.00

Notes: Significant at $^{*}p < 0.05$ and $^{**}p < 0.01$

shown in Table II, since there are statistically significant relationships among the various PCSFs, the null hypothesis is rejected in favour of the alternate hypothesis of important differences.

Investment analysis (IAN) was, for, example positively associated with marketing actions (MKT; $r = 0.2678$) and working capital management (WCM; $r = 0.6351$) at the $p < 0.01$ level of confidence, and with human resource development (HRD) at the $p < 0.05$ level of probability ($r = 0.2081$). This implies that the PCSFs are not independent of each other. They are interrelated factors. Problems in one PCSF may have serious impact on other PCSFs. For example, the highest correlation coefficient (r) is found for WCM and IAN at $r = 0.6351$ and $p < 0.01$. As the impacts of lack of proper investment analysis increases, the problems of SMEs related to working capital management also increases. Similarly, human resource development (HRD) related problems are positively associated with socio-economic (SOE), technical regulatory changes (CHG), and organizational design (ORD) related problems at $p < 0.01$ and with marketing (MKT), IAN, and working capital management (WCM) at $p < 0.05$.

Except for the customer relationship (CRN) factor, all other factors are positively associated with at least two factors within the limits of the 5 per cent confidence level. Marketing action factors are closely associated with working capital management, socio-economic issues, and organisational development factors at the 5 per cent confidence level, while at the same time being related with investment analysis, technological changes, HRM development, managerial action, and customer relations factors at the 1 percent confidence level. This implies that companies that experience marketing related problems (i.e. lack of marketing research and information, lack of market segmentation, lack of product/service marketing, lack of clear pricing policy and strategy and lack of demand forecasting) also experience investment analysis problems (lack of record keeping and documentation, insufficient provision for contingencies, inadequately estimated capital requirement, failure to analyse financial statements, misperception of turnover as profit and under-utilisation of company assets) and working capital problems. This, it can be argued, is due to two fundamental problem areas:

(1) organisational development; and

(2) HRM development.

HRM development problems that companies experience could be related to organisational development problems (lack of clear division of activities and duties, lack of open communication, lack of a proper organisational structure, centralised one-man decision making, low level of formalisation of working procedures and low level of standardisation of products and services), which in turn is related to the managerial background of the owner/manager. Table II shows a very strong association between organisational development and HRM development and managerial background at the 1 per cent confidence level. At the same time the association between HRM development and managerial background is very strong at the 1 per cent confidence level. Another important set of associations that can be identified from Table II is the relationship between socio-economic issues and technology-regulatory changes, organisational development, HRM development and managerial background, all at the 1 per cent confidence level.

H0$_2$ states that there are no statistically significant relationships between the firms' and the owner/managers' characteristics, and the PCSFs. Table II shows analysis of variance (ANOVA) conducted at the $p < 0.05$ and $p < 0.01$ levels of significance to test the above hypothesis. The following section presents the results of the test procedure.

Firm size and PCSFs. Table III shows that there are statistically significant relationships between firm size (as defined by number of full-time paid employees) and technological and regulatory factors ($F = 3.22, p = 0.042$, df $= 2/171$) at the 5 per cent level of confidence. The null hypothesis can thus be rejected and the alternate hypothesis of a significant relationship between firm size and selected CSFS can be accepted. As SMEs grow in size, the more they view technological and regulatory changes in their environment as CSFs. Thus, perceptions of external environmental factors such as competitors, customers, suppliers, technology, economic, socio-cultural changes vary from small to medium-sized and large firms. Larger firms put greater emphasis on external environmental factors as CSFs than do their smaller counterparts.

Industry type, forms of business and PCSFs. There are no significant relationships between industry type and form of business, and any of the PCSFs. The null hypothesis of no difference can thus not be rejected, as there are no evidences of significant relationships between these two firm characteristics variables and PCSFs. This implies that there are no important differences between service, merchandising and manufacturing organisations in their perception of the impact of selected PCSFs on business performance. This also implies that there are no important differences between sole proprietors and partnerships as well as the corporation form of organisations in their perception of the impact of selected factors on business performance.

		Firm characteristics					
		Firm size	Form	Industry	Firm age	df	*n*
df		2	2	2	3		
MKT	*F*	1.55	2.14	0.68	2.05	184	186
	p	0.22	0.12	0.51	0.11		
IAN	*F*	0.48	2.26	1.13	3.52*	167	186
	p	0.62	0.11	0.33	0.01*		
WCM	*F*	0.45	1.64	1.34	2.54	169	193
	p	0.64	0.20	0.27	0.06		
SOE	*F*	1.34	1.11	2.60	3.01*	166	179
	p	0.26	0.33	0.08	0.03*		
CHG	*F*	3.223*	0.85	0.06	2.86*	171	184
	p	0.042*	0.43	0.95	0.03*		
ORD	*F*	2.05	1.80	0.16	0.55	170	181
	p	0.13	0.17	0.85	0.64		
HRD	*F*	2.09	2.63	0.14	1.33	170	183
	p	1.13	0.08	0.87	0.26		
MAB	*F*	2.32	0.86	1.43	2.98*	186	198
	p	0.10	0.43	0.24	0.03*		
MAC	*F*	3.00	2.06	0.44	0.93	172	198
	p	0.05	0.13	0.64	0.43		
CRN	*F*	0.53	1.01	0.48	0.03	176	189
	p	0.59	0.37	0.62	0.99		

Notes: Significant at $^{*}p < 0.05$ and $^{**}p < 0.01$

Table III.
Relationship between firm characteristics and PCSFs

Managerial status and PCSFs. Ownership status evaluates whether the respondents are sole owners of the firm, part owners or employed professional managers only. As clearly shown by the asterisks in Tables III and IV, ownership status has a statistically significant relationship with selected CSFs at the $p < 0.05$ and $p < 0.01$ levels of confidence. The null hypothesis of no significant relationship between ownership status and selected CSFs can thus be rejected in favour of the alternate hypothesis of important differences. It is interesting that ownership status is significantly related to marketing, investment analysis and socio-economic issues at the $p < 0.05$ confidence level and also related to managerial background, managerial action and customer relations related CSFs at $P < 0.01$ confidence level. From this, one can infer that the perceptions of SMEs about the impact of different CSFs on business performance vary with the ownership status of the respondents. Owner managers may perceive some factors more differently than part owner managers or employed professional managers. Their differences are more significant for managerial background (MAB), Managerial activities (MAC) and Customer Relationship (CRN) factors than for marketing (MKT), Investment analysis (IAN) and Socio-Economic (SOE) factors as shown by the level of significance.

Managerial experience and PCSFs. Managerial experience was evaluated on the basis of the number of years one has been managing the firm. Table IV shows that managerial experience is significantly related to technological and regulatory changes (CHG) in the environment ($F = 3.80$, $p = 0.01$, $\mathrm{df} = 3/171$) at the $p < 0.05$ confidence level, and to human resource development (HRD) issues ($F = 5.94$, $p = 0.00$, $\mathrm{df} = 3/170$) at the $p < 0.01$ level. The more experienced the manager is in

		Owner/managers' characteristics				
		Status	Experience	Citizenship	df	n
df		3	3	2		
MKT	F	3.14*	1.75	0.02	184	186
	p	0.02*	0.16	0.98		
IAN	F	3.49*	2.55	2.22	167	186
	p	0.02*	0.06	0.11		
WCM	F	0.92	0.83	2.18	169	193
	p	0.43	0.48	0.12		
SOE	F	2.70*	1.04	4.29*	166	179
	p	0.04*	0.38	0.01*		
CHG	F	0.22	3.80*	2.20	171	184
	p	0.88	0.01*	0.11		
ORD	F	2.02	0.11	2.12	170	181
	p	0.11	0.96	0.12		
HRD	F	1.36	5.94	1.00	170	183
	p	0.26	0.00**	0.37		
MAB	F	6.16**	1.97	1.59	186	198
	p	0.00*	0.12	0.21		
MAC	F	4.59*	0.13	1.55	172	198
	p	0.00*	0.94	0.22		
CRN	F	4.84	0.02	4.21*	176	189
	p	0.00*	1.00	0.02*		

Notes: Significant at $^{*}p < 0.05$ and $^{**}p < 0.01$

Table IV. Relationship between owner/managers' characteristics and PCSFs owning/running a business, the more he/she perceives technological and regulatory changes and human resource development issues as critical success factors for firms. The more experienced the manager/owner is, the more likely he/she is to explore new changes (technological or new legislation and regulations) and to perceive human resource development issues as PCSFs.

Firm age and PCSFs. Table III shows that there are significant relationships between firm age (as defined by the number of years the firm has been in operation) and investment analysis issues (IAN; $F = 3.52$, $p = 0.02$, $\mathrm{df} = 3/167$), socio-economic issues (SOE; $F = 3.018$, $p = 0.03$, $\mathrm{df} = 2/166$), technological and regulatory changes (CHG; $F = 2.861$, $p = 0.04$, $\mathrm{df} = 2/171$) and managerial background and skills (MAB; $F = 2.978$ $p = 0.03$, $\mathrm{df} = 2/186$), all at the $p < 0.05$ level of significance. The null hypothesis of no difference is therefore rejected in favour of the alternate hypothesis of a significant relationship between firm age and selected PCSFs.

Citizenship and PCSFs. The citizenship of respondents was also related to perception of the impact of PCSFs on SMEs. This means that whether owners/managers are Botswana citizens, foreigners or whether Botswana citizens and foreigners jointly own the business, their perception of selected PCSFs will not be significantly different. However, as shown in Table IV there are statistically significant relationships between citizenship and perception of socio-economic issues (SOE; $F = 4.291$, $p = 0.015$, $\mathrm{df} = 2/166$), and customer relationship issues (CRN; $F = 4.209$, $p = 0.016$, $\mathrm{df} = 2/176$) at the $p < 0.05$ level of significance. This implies that citizen owner-managers and non-citizens perceive some issues, such as the socio economic environment and customer related issues, differently.

Conclusions and implications

This study presents a mixture of results and therefore cannot be said to be complete. More studies of this nature are needed to confirm the results of this study. However, a number of conclusions and implications can still be drawn from this study.

Although the problems faced by SMEs are numerous and complex, this paper found ten sets of PCSFs that affect the performance and development of firms. Since these PCSFs have varying degrees of impact on the performance of SMEs, customised intervention mechanisms should be developed to overcome their impact and facilitate the growth of SMEs. The study also found important differences between firm characteristics and perceptions of the impacts of the selected PCSFs, indicating that a "one size fits all' approach will not work in designing support programmes and policies for SMEs. As the performance impacts of different sets of problems vary from firm to firm, there is a strong need to study carefully the real problems of different groups of enterprises. The impact of certain PCSFs may not be the same for firms in the retail sector and firms in the manufacturing or agricultural sectors. Previous studies have confirmed that financial performance is a function of firm characteristics. Performance varies from small to medium-sized and large firms, from industry to industry, and with managerial profile. Similarly, the perceptions of SMEs about the impacts of various external and internal factors on their performance vary from firm to firms. Large firms put a greater emphasis on external environmental factors (techno-regulatory) than their smaller counterparts.

The existence of an important relationship between firm size and a critical success factor – i.e. techno-regulatory changes – shows that firms of different sizes perceive the impact of some factors differently. Thus, any small business assistance, be it financial or educational, should take the size of the firm into consideration in designing assistance policies and programmes. However, the type of industry and the legal form of a business do not have an important relationship with the critical factors. SMEs' perception of PCSFs is somehow similar across industry and form of organization implying that an integrated SME assistance support can be designed for all sectors and forms of ownership. An interesting relationship was found between owner status and PCSFs. Owner managers, part-owner managers and professional/employed managers perceive the impact of marketing, investment analysis, socio-economic issues, techno-regulatory changes, managerial background, managerial actions and customer relationships differently. This calls for another investigation of why owners, part owner-managers and salaried managers perceive problems differently. This investigation may lead to the preparation of special training packages for managers of different status in the company. Managerial experience is also related to the perception of techno-regulatory changes and HR development. Highly experienced managers evaluate and understand business problems differently from those who are inexperienced. Firm age is also significantly related to many PCSFs. The citizenship of owners is also somehow related to socio-economic and customer related critical issues. This shows that small business assistance programmes should be designed effectively address to the problems of firms of different sizes, managerial status, experience, and age and owner citizenship.

Finally, the study found important relationships among the PCSFs themselves. For example, problems related ro working capital management have a strong association with problems under the investment analysis category. Although this does not show any causal relationship, the direction of their relationship is clear. Problems in working capital management may increase the likelihood for the firm to experience investment analysis related problems or vice versa. From these relationships one can understand the need to address problems of SMEs in a holistic manner, rather than employing a fragmented approach of addressing only a few problem areas and neglecting the others. The traditional approach to designing assistance programmes and policies for SMEs in Botswana is fragmented and not sufficiently comprehensive to address the basic problems and were not based on an empirical investigation of actual problems affecting their performance. Even today, the Citizen Entrepreneurial Development Agency (CEDA), the much admired business support agency in Botswana, focuses largely on financial assistance. Only little attention has so far been given to other areas of assistance like the provision of customised entrepreneurial training and education and new business incubation programmes.

References

Abdullah, M.A. and Baker, M. (Eds) (2000), *Small and Medium Enterprises in Asian Pacific Countries. Volume. 1. Roles and Issues*, Science Publishers, Inc., Huntington, NY.

Argenti, J. (1976), *Corporate Collapse: The Causes and Symptoms*, McGraw-Hill, London.

Bhutta, M.K.S., Rana, A.I. and Asad, U. (2008), "Owner characteristics and health of SMEs in Pakistan", *Journal of Small Business and Enterprise Development*, Vol. 15 No. 1, pp. 130-49.

Cronbach, L.J. (1951), "Coefficient alpha and the internal structure of tests", *Psychometrika*, Vol. 16, pp. 297-334.

Dodge, H.R. and Robbins, J.E. (1992), "An empirical investigation of the organizational life cycle model for small business development and survival", *Journal of Small Business Management*, Vol. 30 No. 1, pp. 27-38.

Drucker, P. (1984), "Our entrepreneurial economy", *Harvard Business Review*, Vol. 62 No. 1, pp. 58-64.

Elenkov, D.S. (1997), "Strategic uncertainty and environmental scanning: the case for institutional influences on scanning behavior", *Strategic Management Journal*, Vol. 18 No. 4, pp. 287-302.

Fabling, R. and Grimes, A. (2007), "HRM practices and firm performance: what matters and who does it?", Occasional Paper 07/02, Ministry of Economic Development, Wellington.

Government of Botswana (1999), "Policy on small, medium and micro enterprises in Botswana", Government White Paper No. 1, Government Printing Press, Gaborone.

Haswell, S. and Holmes, S. (1989), "Estimating the small business failure rate: a reappraisal", *Journal of Small Business Management*, Vol. 27 No. 3, pp. 68-74.

Hendricks, K.B. and Singhal, V.R. (2001), "Firm characteristics, total quality management, and financial performance", *Journal of Operations Management*, Vol. 19 No. 3, pp. 269-85.

Huang, X. and Brown, A. (1999), "An analysis and classification of problems in small business", *International Small Business Journal*, Vol. 18 No. 1, pp. 73-86.

Katsikeas, C.S. (1994), "Export competitive advantages", *International Marketing Review*, Vol. 11 No. 3, pp. 33-53.

Keats, B.W. and Bracker, G. (1988), "Toward a theory of small firm performance: a conceptual model", *American Journal of Small Business*, Vol. 12, Summer, pp. 41-58.

Miller, C.C., Burke, L.M. and Glick, W.H. (1998), "Cognitive diversity among upper-echelon executives: implications for strategic decision processes", *Strategic Management Journal*, Vol. 19 No. 1, pp. 39-58.

Muranda, Z. (2003), "Relationships between firm characteristics and export constraints in SME exporters", *Zambezia*, Vol. 30 No. 1, pp. 89-107.

Nunnally, J.C. (1978), *Psychometric Theory*, McGraw-Hill, New York, NY.

Pansiri, J. (2007), "How company and managerial characteristics influence strategic alliance adoption in the travel sector", *International Journal of Tourism Research*, Vol. 9 No. 4, pp. 243-55.

Pansiri, J. and Temtime, Z.T. (2008), "Assessing managerial skills in SMEs for capacity building", *Journal of Management Development*, Vol. 27 No. 2, pp. 251-60.

Peterson, R.A., Kozmetsky, G. and Ridgway, N.M. (1983), "Perceived causes of small business failures: a research note", *American Journal of Small Business*, Vol. 8, Summer, pp. 15-19.

Pett, T.L. and Wolff, J.A. (2003), "Firm characteristics and managerial perceptions of NAFTA: an assessment of export implications for US SMEs", *Journal of Small Business Management*, Vol. 41 No. 2, pp. 117-32.

Pretorius, M. (2004), "Entrepreneurial and small business strategy", in Ehlers, T. and Lazenby, K. (Eds), *Strategic Management: Southern African Concepts and Cases*, Van Schaik, Pretoria, pp. 254-73.

Sawyer, O.O. (1993), "Environmental uncertainty and environmental activities of Nigerian manufacturing executives: a comparative analysis", *Strategic Management Journal*, Vol. 14 No. 4, pp. 287-99.

Schwartz, K.B. and Menon, K. (1985), "Executive succession in failing firms", *Academy of Management Journal*, Vol. 28 No. 3, pp. 680-6.

Shergill, G.S. and Sarkaria, M.S. (1999), "Impact of industry type and firm characteristics on firm level financial performance-evidence from Indian industry", *Journal of Entrepreneurship*, Vol. 8 No. 1, pp. 25-44.

Temtime, Z.T. (2002), "The planning behavior of SMEs in developing economies: a preliminary investigation", *African Journal of Finance and Management*, Vol. 11 No. 1, pp. 36-42.

Temtime, Z.T. and Pansiri, J. (2003), *Identifying Small Business Critical Success Factors for a Procreative Entrepreneurial Development Program in Botswana*, University of Botswana, Gaborone.

Temtime, Z.T. and Pansiri, J. (2004a), "Small business critical success/failure factors in developing economies: some evidences from Botswana", in Muuka, G.N. (Ed.), *The International Academy of African Business and Development (IAABD) 5th International Conference, Atlanta, GA, 2004 IAABD Proceedings: Building Bridges For African Business & Development*, Murray State University, Murray, KY, pp. 295-303.

Temtime, Z.T. and Pansiri, J. (2004b), "Small business critical success/failure factors in developing economies: some evidences from Botswana", *American Journal of Applied Sciences*, Vol. 1 No. 1, pp. 18-25.

Temtime, Z.T. and Pansiri, J. (2005), "Managerial success/failure factors in small and medium enterprises in developing economies: some evidence from Botswana", *Problems and Perspectives in Management*, Vol. 1, pp. 25-36.

Temtime, Z.T. and Pansiri, J. (2006a), "Perceived managerial problems in SMEs: evidence from Botswana", *Development and Learning in Organizations*, Vol. 20 No. 5, pp. 15-17.

Temtime, Z.T. and Pansiri, J. (2006b), "A proactive marketing and financial management for small and medium enterprises", *BIAC Journal: A Journal of Business, Management and Training*, Vol. 2 No. 1, pp. 53-67.

Viviers, S., Van Eden, S. and Venter, D. (2001), "Identifying Small Business Problems in the South African Context for a proactive entrepreneurial education programme", paper presented at the Global IntEnt 2001 11th International Conference, Kruger National Park, 2-4 July.

Wan, T.W.D., Ong, C.H. and Lee, W.S.F. (2000), "The impact of firm characteristics on firm innovation", *Management of Innovation and Technology, ICMIT 2000. Proceedings of the 2000 IEEE International Conference*, pp. 180-4.

Weitzel, W. and Jonsson, E. (1989), "Decline in organizations: a literature integration and extension", *Administrative Science Quarterly*, Vol. 34 No. 1, pp. 91-109.

Wichmann, H. (1983), "Accounting and marketing – key small business problems", *American Journal of Small Business*, Vol. 7 No. 4, pp. 19-26.

Wijewardena, H., Nanayakkara, G. and De Zoysa, A. (2008), "The owner/manager's mentality and the financial performance of SMEs", *Journal of Small Business and Enterprise Development*, Vol. 15 No. 1, pp. 150-61.

Wincent, J. (2005), "Does size matter? A study of firm behavior and outcomes in strategic SME networks", *Journal of Small Business and Enterprise Development*, Vol. 12 No. 3, pp. 437-53.

Corresponding author
Jaloni Pansiri can be contacted at: pansirij@mopipi.ub.bw