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What does a CEO of a firm in crisis do? Evidence from Finnish firms

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Abstract
The objective is to analyze managerial work and the importance of information to CEOs, contrasting crisis firms with non-crisis firms. It is assumed that CEOs of firms in crisis address work and information differently than their counterparts in non-crisis firms. The study is based on a survey completed by 215 top Finnish managers (CEOs. The sample is classified on the basis of financial performance as crisis firms (31) and non-crisis firms (127), with firms of undefined status excluded. Managerial work is captured by Mintzberg's (1973) classification of work roles. The findings show that CEOs of crisis firms suffer from role ambiguity and tend to emphasize interpersonal and decisional roles less than their counterparts. They spend less time on long-term tasks and work less at their offices. CEOs of crisis firms also suffer from low availability of information and pay less attention to information from different sectors.

Keywords: Crisis firms; CEO behaviour; managerial work; Finnish firms

INTRODUCTION
Understanding the behavior of top managers in organizations on the verge of crisis is an important issue in management. It can help managers mitigate unfavorable behavior and the negative impacts of a threat, and even to avoid the final crisis. Therefore, many studies have addressed the behavior of management in declining organizations (Weitzel & Jonsson, 1989; 1991; D'Aveni, 1989; D'Aveni &MacMillan, 1990; Mellahi & Wilkinson, 2004; Trahms, Ndofor & Sirmon, 2013). Weitzel and Jonsson (1991) defined a declining organization as one that fails to anticipate, recognize, avoid, neutralize, or adapt to external or internal pressures that threaten long-term survival. They proposed five stages of organizational decline, namely, the blinded, inaction, faulty action, crisis, and dissolution stages. This study focuses on the crisis stage and the final stages before it occurs. This stage is marked by diminished resources and is a last chance for reorganization and reversal. The crucial question is whether an organization has sufficient resources and effective mechanisms to pursue a major reorganization (Weitzel & Jonsson, 1991). This stage is very much stressed by a condition or event that threatens the survival of the organization (Starbuck, Greve & Hedberg, 1978; D'Aveni & MacMillan, 1990). This event can be declining demand, which often precedes organizational bankruptcy or failure (Hambrick & D'Aveni, 1988). The resultant pressure leads management to behave in ways other than it would in a non-crisis organization.

Different theories predict how senior managers will respond to a crisis (D'Aveni & MacMillan, 1990; Mellahi & Wilkinson, 2004), and the predictions often conflict. The threat-rigidity response and crisis-denial theories suggest that a crisis diverts a CEO's attention away from the locus of the crisis if it creates noise that prevents the CEO from considering relevant information about the source of the crisis (Kiesler & Sproull, 1982). Environmental scanning and stress theories predict that a CEO will pay more attention to an (external) crisis because of the importance, immediacy, and uncertainty of the issue (Dutton, 1986). Mellahi and Wilkinson (2004) concluded that the field of organizational failure could become chaotic and result in a fragmentation trap in which researchers are faced with a multitude of conflicting and unorganized theories and findings. D'Aveni and MacMillan (1990) suggested that the conflict regarding predictions originates from the fact that managers in strong firms and those in failing firms facing a severe external crisis implement fundamentally different response patterns. They indicated that managers of failing firms react to crisis in the manner predicted by the decline, crisis-denial, and threat-rigidity response models. Managers of surviving firms tend to follow the patterns predicted by the environmental scanning and stress theories. D'Aveni and MacMillan identified an association only between output crisis and output focus in the responses of managers of survivor firms.

The scope of the present study is limited and compares managerial behavior in surviving crisis firms and non-crisis firms only. Accordingly, the study uses the environmental scanning and stress theories. The present study follows D'Aveni and MacMillan (1990) but extends their analysis in many ways. D'Aveni and MacMillan (1990) suggested that managers in non-crisis firms pay equal attention to internal and external environments and more attention to the output environment than the input environment. However, managers of surviving crisis firms pay more attention to the external environment. Thus, D'Aveni and MacMillan concentrated on the analysis of the locus of attention. The present study extends this research to analyze the work of managers in (surviving) crisis and non-crisis firms and their preferences for information.

In this study, managerial work is assessed by Mintzberg (1973) role typology with 10 different roles. It is suggested here that CEOs in crisis firms suffer from role ambiguity more than their counterparts in non-crisis firms. In addition, time horizon of tasks and location of work are investigated. The locus of attention is described by the importance and availability of different information sectors. D'Aveni and MacMillan (1990) analyzed the content of senior manager's letters to shareholders in annual reports as manifestations of the perceptual locus of attention. This study uses an Internet-based survey to map the managerial work of CEOs and their perceived importance of job-relevant information.

Consequently, the purpose of this study is to extend research on the behavior of senior managers in surviving crisis firms using a broad framework of managerial-work analysis. The study is based on the results of a survey completed by 215 Finnish senior managers (CEOs) from firms in different industries and of different sizes. The sample is classified on the basis of perceived financial performance into crisis firms (31) and non-crisis firms (127), with firms of undefined status excluded. The findings show that managers in crisis firms suffer more from role ambiguity and tend to emphasize interpersonal and decisional roles, especially Mintzberg's figurehead and leader roles, less than their counterparts in non-crisis firms. They also suffer from low availability of information and pay less attention to long-term tasks and information about customers, employees, and internal processes. Logistic regression analysis shows that a combination of managerial work and information variables efficiently discriminate between managers in crisis firms and their counterparts in non-crisis firms. Thus, CEOs in crisis and non-crisis firms behave in significantly different ways with respect to managerial work and attitudes toward information.

The present study contributes to theory and practice regarding managerial behavior in many ways. First, it is based on the sudden threat of the Great Recession, which provides unique circumstances to test a set of theoretical hypotheses on CEOs' behavior in crisis firms. Second, it provides a justified description of what CEOs of crisis firms are doing and where, and on what kind of information they are prioritizing. Third, the study applies Minzberg's managerial-work-role model to a new crisis situation, revealing important changes in behavior patterns. Fourth, the study clearly shows that the behavior of CEOs in crisis firms differs in many ways from that of CEOs in non-crisis firms. These differences can be used in practice to understand the behavior of top managers in different circumstances and determine different methods for preventing unfavorable behavior traits and enhancing favorable behavior traits. Although Finnish top managers have special characteristics regarding their leadership style and decision making, it is expected that the results can be generalized to most Western countries as they share similar cultures. The special characteristics of Finnish managers include hard (commanding and straightforward) leadership that is often described with the "Management by Damn" concept (Lämsä, 2010), which suggests solving problems in chaotic circumstances is normal for Finnish managers. Therefore, the impact of a crisis on the behavior of a CEO may be even more remarkable in countries other than Finland.

The rest of the paper is organized as follows. The second section reviews prior studies to extract research hypotheses. In total, seven research hypotheses on differences in the behavior of CEOs in crisis firms versus non-crisis firms are presented for empirical analysis. The third section presents the empirical data and statistical methods of the study while the fourth section analyses the results. Simple statistical methods (i.e., mean and median tests, partial correlations, and logistic regression analysis) are used to compare CEOs' managerial behavior in crisis and non-crisis firms. The fifth section discusses the empirical findings and provides a conclusion. It also discusses the limitations of the study and outlines topics for further research.

PRIOR STUDIES AND RESEARCH HYPOTHESES

General framework for managerial work

Managerial work is characterized by variety, fragmentation, and brevity. It includes a large number of tasks outside traditional planning, decision making, and evaluation. These tasks include activities such as negotiating, recruiting, training, innovating, and forms of contact peculiar to individual manager. These tasks are not carried out in an ordered and systematic way. Instead, managerial tasks are characterized by great variety, brevity, fragmentation in time and space, numerous interruptions, and encounters with others (Mintzberg, 1973; Kurke & Aldrich, 1983; Tengblad, 2002; Hall, 2010). These tasks are flexible not only within the organizational environment but also for individual managers so their importance varies from manager to manager (Mintzberg, 1973; 1989). Personal factors such as values, experience, knowledge, competences, and mental models greatly determine how any manager approaches a given job (Mintzberg, 1994; Gottschalk, 2002). However, managerial work is also likely to be related to organizational and environmental factors (e.g., perceived environmental uncertainty (PEU), technology, organizational structure, strategy, and size) (Gottschalk, 2002; Grover, Jeong, Kettinger & Lee, 1993).

The problem with analyzing what CEOs do is that there is no science to managerial work (Mintzberg, 1973). This means that senior managers do not work according to procedures that have been prescribed by scientific analysis. Mintzberg (1973), however, based his managerial-work analysis on the observation that all tasks in managerial work involve one or more of three basic behaviors—with their importance varying from manager to manager—interpersonal contact, processing of information, and making decisions. Several other studies have also found these basic characteristics (intrinsic conditions) of managerial work (Stewart, 1988; Kotter, 1982; Kurke & Aldrich, 1983; Noordegraaf & Stewart, 2000; Tengblad, 2002; 2006). Interpersonal roles are primarily concerned with interpersonal relationships and refer to managing through people. Informational roles focus on the information aspects of managerial work that link all such work and refer to managing by information. Decisional roles are concerned with decision making and refer to managing through action. The three role categories are closely associated with information: interpersonal roles provide information, informational roles process information, and decisional roles use information (Mintzberg, 1973).

Mintzberg (1973) defined the major dimensions of managerial work as consisting of 10 main roles (organized sets of behaviors) grouped into three categories according to their intrinsic conditions. This classification of roles is the best-known and most widely tested construct used to describe managerial work. The three categories and the 10 roles in this classification are: interpersonal roles (Figurehead; Leader; Liaison), informational roles (Monitor; Disseminator; Spokesman), and decisional roles (Entrepreneur; Disturbance Handler; Resource Allocator; Negotiator). Each role is different, reflects different management behaviors and can be described by a different set of tasks (Mintzberg, 1973). These 10 roles act as an integrated whole (a gestalt) and are not easily separated in managerial work. However, the emphasis placed by CEOs on different tasks within the roles varies strongly for different managers in different circumstances, leading to differences in information needs and in the importance ascribed to different forms of information. Table 1 shows the typical tasks for each managerial role as outlined by Mintzberg (Fox, 1992). The table includes 20 managerial tasks describing the 10 roles.

Table 1. Mintzberg's (1973) 10 work roles by three categories with exemplary tasks from Fox (1992)

A. INTERPERSONAL CATEGORY OF ROLES
1. FIGUREHEAD
Task 1: Present employees with prizes or certificates at ceremonies.
Task 2: Represent the organization in outside bodies or at public functions.
2. LEADER
Task 3: Conduct employment, disciplinary, or appraisal interviews.
Task 4: Hold regular meetings with subordinates.
3. LIAISON
Task 5: Regularly hold discussions with colleagues in other organizations.
Task 6: Acknowledge mail from other organizations.
B. INFORMATIONAL CATEGORY OF ROLES
4. MONITOR
Task 7: Regularly make tours of inspection around workplace.
Task 8: Meet fellow managers to discuss mutual problems.
5. DISSEMINATOR
Task 9: Transmit information to subordinates or other appropriate persons in organization.
Task 10: Hold review sessions regarding information with subordinates or other appropriate persons.
6. SPOKESMAN
Task 11: Regularly hold discussions with own supervisor or Board.

Task 12: Act as expert or spokesman for section or organization.
C. DECISIONAL CATEGORY OF ROLES
7. ENTREPRENEUR
Task 13: Supervise design and implementation of organizational projects.
Task 14: Seek opportunities in environment to initiate improvements in organization.
8. DISTURBANCE HANDLER
Task 15: Adjudicate sudden conflicts (over many issues) among subordinates.
Task 16: Hold strategy sessions when problems arise that threaten section or organization.
9. RESOURCE ALLOCATOR
Task 17: Set program and/or budget for section or organization and review regularly.
Task 18: Schedule work program and review and change as needed.
10. NEGOTIATOR
Task 19: Represent section or organization at negotiations with outside groups such as unions or suppliers.
Task 20: Negotiate changes in contracts or commitments with outsiders.

Managerial-role emphasis and ambiguity

Managers emphasize the importance of work roles differently according to personal, organizational, and environmental factors. The relevant work roles tend to remain quite stable for CEOs in stable circumstances. Mintzberg (1973) called these roles organized sets of behaviors: they vary depending on the particular CEO but are reasonably stable over time. However, a CEO's emphasis on managerial work roles can be expected to change when circumstances around the firm change. The general argument of this study is that a CEO's emphasis on work roles changes when a firm enters states of decline, distress, and, finally, crisis. Weitzel and Jonsson (1991) concluded that an organization in decline fails to anticipate, recognize, avoid, neutralize, or adapt to external or internal pressures that threaten long-term survival. There are five stages of organizational decline, namely the blinded, inaction, faulty action, crisis, and dissolution stages (Weitzel & Jonsson, 1991).

The boundaries of these stages are not exact, and different stages can occur at different times in different declining organizations. In this study, the focus is on the crisis stage and the distress stages of the process that occurs just before this stage. Weitzel and Jonsson (1991) stated that an organization is initially blind to the early stages of decline, then recognizes the need for change but fails to take action. Finally, it takes action; however, if the action taken is inappropriate, the organization reaches a point of crisis and may be forced to dissolve if the process continues. Thus, this process can be described as increasing distress that culminates in the final stages. The crisis stage is characterized by diminished resources and can be described as a last chance for reorganization and reversal. D'Aveni and MacMillan (1990) defined crisis as any event or condition that threatens the survival of an organization. An example of crisis is declining or stagnant demand, which frequently precedes organizational bankruptcy (Hambrick & D'Aveni, 1988). Crisis is often associated with circumstances in which there is little time to react and the threat is unanticipated (Staw, Sandelands & Dutton, 1981). In this study, crisis or serious distress is empirically associated with a sudden decline in demand originating from the Great Recession.

If an organization is already in the inaction stage, uncertainty about internal problems makes it more difficult to gain agreement from managers about the direction in which the firm should move. Without strong commitment, there is insufficient organizational power to implement difficult decisions (Thompson, 1967). In the inappropriate action stage, there is a necessity for change in the process of decision making and the implementation of decisions (Kaufman, 1985). Leadership is questioned, and individual leaders are subjected to increasing stress.

Leaders are forced by circumstances to consider substantive changes and can no longer defend the goals and methods appropriate for a business-as-usual phase (Starbuck, Greve & Hedberg, 1978). Schendel, Patton and Riggs (1976) referred to this stage as the introduction of new leadership. When an organization reaches the crisis stage, it has unsuccessfully attempted to deal with its problems, which will have resulted in crisis, chaos, procrastination, efforts to go back to basics, change, and anger (Levy, 1986:13). It is here that an organization reaches a critical point in its history and must undergo major reorientation and revitalization or suffer failure. The prescription for recovery from crisis is instituting a major reorganization and turnaround. Revolutionary changes in structure, strategy, personnel, and ideology are necessary (Hedberg, Nystrom & Starbuck, 1976). A lack of action will precipitate certain failure (Weitzel & Jonsson, 1991).

In summary, the adaptive responses to a situation that challenges or threatens an organization's survival, leading to increasing distress, are expected to result in increased stress for a CEO during the last stages of decline (cf. Staw, Sandelands & Dutton, 1981). This adaptation causes CEOs to continuously question and adjust their emphasis on managerial work roles. Therefore, a general behavioral hypothesis is suggested that CEOs' emphasis on work roles in crisis firms significantly differs from CEOs' emphasis on work roles in non-crisis organizations. This hypothesis (H1) is as follows:

Hypothesis H1: Emphasis on managerial work roles differs between CEOs in crisis firms and CEOs in non-crisis firms.

The inaction and faulty action stages of an organization decline before a crisis, a factor that gives rise to questions over the roles of CEOs. It is expected that continuous questioning and reorientation of the emphasis on different work roles increases CEOs' role ambiguity, which refers to uncertainty regarding aspects of their roles (Kahn, Wolfe, Quinn, Snoek & Rosenthal, 1964). Role ambiguity is problematic, especially for CEOs in declining or distressed organizations, because the resulting unfavorable personal outcomes (stress, lower levels of performance) are likely to prove disadvantageous to survival and to further worsen the difficult situation in which a crisis organization operates (Marginson, 2006). The second research hypothesis accordingly suggests that the degree of role ambiguity is higher for CEOs in crisis firms than their counterparts in non-crisis firms. This hypothesis (H2) is as follows:

Hypothesis H2: The degree of work-role ambiguity is higher for CEOs in crisis firms than for CEOs in non-crisis firms.

Emphasis on the three role categories

When an organization enters the final stages of decline, its CEO will experience increased stress due to the firm's financial distress. The typical symptoms of stress behavior are social withdrawal or a person isolating himself from a group (cf. Staw, Sandelands & Dutton, 1981; Weiss, 1983). This kind of behavioral symptom can be characterized by a fear of social or performance situations in which a CEO has a personal contact with subordinates fearing for their future, or indeed with the firm's board. However, at the same time, CEOs can receive important social support from their colleagues and other managers (Weiss, 1983). These stress symptoms (such as social withdrawal) indicate that the importance of interpersonal roles (information providing) as perceived by CEOs decreases during the final stages of decline. The second important symptom of stress behavior in this context is indecisiveness, evident when CEOs have the power to determine an outcome but are not able to reach a conclusion (inaction stage). In the final stages of decline, indecisiveness magnifies the stress on CEOs because difficult decisions must be made simultaneously to avoid failure. This kind of situation is expected to lead to a reduction in the perceived importance of decisional roles (information use).

The outcome of the emphasis of informational roles is not as obvious. Increased uncertainty in the context of crisis can affect the importance of informational roles in many ways. It can increase the importance of these roles (information processing) because CEOs must identify opportunities, detect and interpret problem areas, and implement strategic or structural adaptations (Daft, Sormunen & Parks, 1988). However, threats can also result in the overload of communication channels and restriction of information processing, diminishing the importance of informational roles. It is also possible that psychological stress can even freeze CEOs' behavior, leading to them persevering with well-learned courses of action (Staw, Sandelands & Dutton, 1981). Because of the mixed potential consequences of crisis, a null hypothesis that the importance of informational roles does not change due to distress or crisis is proposed. In summary, the following hypotheses (H3a-c) are suggested for each category of managerial roles:

Hypothesis H3a: Emphasis on interpersonal roles for CEOs in crisis firms is lower than for CEOs in non-crisis firms.

Hypothesis H3b: Emphasis on decisional roles for CEOs in crisis firms is lower than for CEOs in non-crisis firms.

Hypothesis H3c: Emphasis on informational roles does not differ between CEOs in crisis firms and CEOs in non-crisis firms.

Time Horizon and Place of Work

It is expected that distress alters the time horizon of managerial tasks accomplished by CEOs. In the management hierarchy, CEOs are expected to focus on strategic tasks with a long-term time horizon. In reality, CEOs spend little time on strategic tasks and are subject to constant interruptions. They hold face-to-face meetings and move quickly from topic to topic (Mintzberg, 1975). The task agendas that CEOs carry in their heads may contain dozens of items on which they are working at the same time (Carroll & Gillen, 1984). Mintzberg (1979) summarized that CEOs are driven to focus on current, tangible work even though the complex problems facing many organizations call for reflection and a far-sighted perspective.

Tengblad (2002) concluded that the view of CEOs as strategic actors should be balanced by an emphasis on the difficulties of navigating in a complex environment. In this environment, CEOs are challenged to deal with the pressures of superficiality by giving serious attention to the issues requiring it (Mintzberg, 1975). In the final stages of organizational decline, limits on CEOs' time and attention guarantee that all issues will not be attended to equally (Dutton, 1986). Threatening and acute issues act as catalysts to action by raising particular issues' priority. Thus, CEOs' prioritization of tasks during the final stages of a crisis is expected to move from long-term time-horizon tasks toward short-term time-horizon tasks (Smart & Vertinsky, 1977; D'Aveni, 1989; D'Aveni & MacMillan, 1990). Accordingly, the following hypothesis (H4) is suggested:

Hypothesis H4: CEOs in crisis firms give less time to long-term horizon tasks than CEOs in non-crisis firms.

Crisis is also expected to influence the places where CEOs conduct their work. Tengblad (2002) showed that CEOs spend their working hours primarily (31%) in their own offices or elsewhere in their firms. This result is different to some degree but consistent with the results of Carlson's (1951) older study (41%). However, when an organization enters the final stages of decline, the CEO's increasing stress and ever more limited time might diminish time spent in the office for several reasons. First, stress is often associated with loss of concentration, which makes it difficult for CEOs to focus on desk work and creates pressure to work outside the firm in spite of tension regarding social withdrawal. Second, outside the office, CEOs can search for social support when meeting colleagues and other managers. Third, taking care of the threatening and acute issues associated with crisis can force CEOs out of their offices. Drucker (2005) described a CEO's work in the following terms:

The CEO is the link between the Inside that is the organization, and the Outside of society, economy, technology, markets, and customers. Inside there are only costs. Results are only on the outside.

In the final stages of decline, CEOs can be strongly oriented toward results, which means they are strongly inclined to work away from the firm. Therefore, it is expected that CEOs in crisis firms spend less time in the office than CEOs in non-crisis firms, which leads to the following hypothesis (H5):

Hypothesis H5: CEOs in crisis firms spend less time in the office than CEOs in non-crisis firms.

Importance of information

The role of information in adaptive response to crisis or distress is central since information is the first link in the chain of perception and actions that permit an organization to adapt (cf. Daft, Sormunen & Parks, 1988). CEOs are responsible for adaptation but have limited time and capacity to implement it and must choose between different information sectors. The threat-response model argues that stress changes CEOs' information-processing patterns and generates increased search behavior, which can result in information overload (Staw, Sandelands & Dutton, 1981; D'Aveni & MacMillan, 1990). This confusion can hide the real cause of crisis, which makes CEOs restrict their information sectors and turn their attention to simplistic efficiency concerns such as identifying lower-cost inputs and finding ways to use internal resources differently (D'Aveni & MacMillan, 1990). Thus, restriction of the information perspective can lead CEOs to rely on internal hypotheses and prior expectations and direct their attention to dominant or central cues and away from peripheral cues (Staw, Sandelands & Dutton, 1981).

Consequently, CEOs in crisis firms are expected to place less importance on information about the output environment (customer needs, growth of demand) and more importance on input and the internal environment than CEOs in non-crisis firms do (in this context, it is also possible that psychological stress can even cause a CEO to freeze, as in fail to act.) Staw, Sandelands and Dutton (1981) noted that for some crisis firms, emphasizing input can be enough to save the firm from failure. However, this type of response is risky and can lead to failure when demand declines. The crisis firms in this study were confronted by a sudden decline in demand but in most cases were survivors. The behavior of a CEO in a surviving crisis firm can significantly differ from that found in a failing crisis firm. For the most part, the sample firms are small businesses, which often have inadequate information systems (Lybaert, 1998). Therefore, an important cause of crisis in small firms may be lack of information rather than information overload.

When a small firm with inadequate information systems is faced with a sudden decline in demand, there are three important perspectives of information (central cues) where the CEO's attention should be directed. First, financial information plays a central role in many stages of decline and should stimulate a CEO to pay attention to adaptation (Argenti, 1976; Weitzel & Jonsson, 1991). Second, decline in demand results in information about how customers play a central role. In fact, customer needs and demand growth rates are the two most frequently identified critical success factors (D'Aveni & MacMillan, 1990). Third, the main problem of coping with declining demand is associated with adaptation to declining demand in terms of employees, with the potential use of reorganization, dismissals, and redundancies (Greenhalgh, Lawrence & Sutton, 1988). These kinds of adaptive actions can have serious consequences for employee motivation and firm performance. Therefore, information on employees is critical in this stage.

In summary, it is assumed that CEOs in crisis firms suffer from a lack of financial, customer, and employee information more than CEOs in non-crisis firms. Furthermore, it is suggested that this lack of information is associated with the lower importance placed by CEOs on these information sectors. If it is deemed of low importance, such information is not available when a firm becomes distressed and enters the crisis stage. Accordingly, the following hypotheses (H6 and H7) are proposed:

Hypothesis H6: CEOs in crisis firms assign financial, customer, and employee information less importance than CEOs in non-crisis firms.

Hypothesis H7: CEOs in crisis firms suffer from a lack of financial, customer, and employee information more than CEOs in non-crisis firms do.

EMPIRICAL DATA AND STATISTICAL METHODS

Empirical data

Empirical data for the present study on managerial work are based on an Internet-based survey conducted in January 2009. Statistical sampling was based on a data bank provided by Fonecta Finder, a Finnish operator that maintains an electronic telephone directory of Finnish businesses. Moreover, this directory includes email addresses of key people in firms. Using information in the data bank, firms outside the scope of the study were excluded. First, as the study deals with managerial work roles and the systematic use of information, firms were required to have more than 10 employees in the previous year, which is the lower size limit to indicate a firm has sufficiently organized management processes to merit having a CEO. Thus, (originally) micro firms were excluded from the sample: however, the number of employees in many crisis firms dipped below the limit of 10 in the crisis years 2008 and 2009. Second, the sample was restricted to limited liability companies, which, according to the Limited Liability Companies Act (LLCA) in Finland, must have a CEO. Third, the sample includes only firms with an email address for a CEO listed in the Fonecta data bank.

The final population included 11,790 firms, and 10% were randomly selected so that the sample comprised 1,179 limited companies. However, for technical reasons, it was not possible to reach 119 firms so the final sample was of 1,060 limited liability companies. A cover letter with a link and password to a web page containing the questionnaire was sent to the email address of the CEO of each firm. To ensure the reliability of responses and to complement the data, the data collection process included an option to later record and check responses. Three follow-up emails were sent, and after eight weeks, 222 firms (20.24%) responded to the questionnaire. Because of missing values, seven questionnaires were excluded from the later analysis, and thus the final sample comprised 215 firms, which corresponds to a response rate of 20.0%. The sample firms represent different industries: 31.1% are service firms while 25.3% and 16.3% belong to the manufacturing and trade industries, respectively. In general, the firms are small businesses and about 73.8% have less than 50 employees. The sample also includes a few firms (5.5%) with more than 500 employees. The size distribution is skewed and is consistent with the size distribution among limited liability companies in Finland.

The research time period provides us with an excellent opportunity to investigate the effect of sudden decline in demand on the adaptation of business firms. The 2008 financial crisis produced a significant economic shock to the global economy. This crisis first touched the U.S. financial sector in 2007, but the effects spread to several national economies, resulting in what has often been called the Great Recession. The shockwaves from the crisis were sorely felt in Finland in general and among the CEOs in the sample firms. First, a sharp decrease in GDP (-2.4%) was observed in the last quarter of 2008 and continued through the first quarter of 2009. In 2009, GDP fell by 8.5%, a decline that matched that of 1918, when Finland was in the middle of a civil war. Because crisis is the consequence of a sudden threat, the beginning of the Great Recession provides unique potential for crisis research. In Finland, the recession continued for years and changed the business environment of firms. Accordingly, a similar survey on the effects of a sudden shock could not be undertaken in the current unfavorable but stable circumstances.

The questionnaire survey was conducted in January 2009, which was in the middle of the worst period of shock. The questionnaire asked CEOs to assess the overall performance of their firm in comparison with its most important competitors using 7-point Likert scales. The concept of overall performance was defined as the ability to generate profit, to grow, and to maintain liquidity and solvency at a sufficient level. On the Likert scale, 1 reflected a much worse ability, 4 about the same ability, and 7 a much better ability than that reported by a firm's most important competitors. The crisis group of firms included those that assessed their performance on this scale as 1–3 and the control group included those that assessed their performance as 5–7. Firms with undefined status (4) were excluded. Accordingly, there were 31 crisis firms and 127 non-crisis firms. It should be noted that non-crisis firms were also exposed to threats; however, they adapted to the circumstances and did not enter the crisis process.

Table 2. Median values of financial ratios for crisis and non-crisis firms

	Crisis firms (median)				Non-crisis firms (median)			
Financial ratio	2008	2009	2010	2011	2008	2009	2010	2011
Return on investment ratio (%)	7.8000	6.400	9.900	10.300	20.050***	12.500*	10.300	13.000
Growth in net sales (%)	-0.1000	-10.100	10.500	3.500	10.300**	-6.000	4.450	8.400
Quick ratio	0.9000	1.000	1.100	1.500	1.500***	1.500**	1.400	1.300
Equity ratio (%)	24.9000	26.050	26.000	35.900	44.850***	45.100***	44.600**	46.900

Note:
p-value of 2-tailed Mann–Whitney U test: *** = p < 0.01; ** = p < 0.05; * = p < 0.1

It is important that performance assessment by CEOs was self-reported as this shows that the crisis firms had passed at least the first stage of organizational decline, the blinded stage, and entered the final stages of distress and crisis. However, to avoid any common method bias, it was important to validate the firms' performance using other sources of information. Therefore, the financial situation of firms in the two groups was assessed by objective measures using financial statement analysis for several years during and after the survey date, ending in 2014. Table 2 shows the median values of return on investment ratio (ability to generate profit), growth rate in net sales (ability to grow), quick ratio (liquidity), and equity ratio (solvency). The figures show that, on average, crisis firms in 2008 consistently suffered from low profitability, declines in sales, low liquidity, and low solvency, all of which are typical financial signs of crisis. In 2008, the four indicators were all statistically significantly lower for the crisis firms than for the non-crisis firms. However, in 2010, the crisis firms began to recover and grow very quickly. In 2011, the differences in the ratios between the groups were no longer significant. For the most part, the crisis firms were declining but not failing organizations. By 2012, two of the 31 crisis firms (6.5%) had gone bankrupt while only one of the 127 (0.8%) non-crisis firms had, meaning that almost all the firms are survivors.

Variables

Managerial-role emphasis and role ambiguity

The measurement of survey variables is described in Appendix 1. In this study, the managerial work of CEOs was measured by the perceived importance of the role tasks presented by Mintzberg (1973). This classification of roles is the best-known and most widely tested construct used to describe managerial work. The description of the 10 roles is based on a brief summary of the basic tasks conducted by CEOs in these roles. In the present survey, the work roles are examined using the typical tasks delineated by Mintzberg. There are two tasks for each role for a total of 20 tasks. The 20 managerial tasks used in the questionnaire are the same as those presented in Table 1. The survey tool employed was successfully used by Fox (1992). The survey tool assesses the importance of tasks with questions that ask CEOs to rate how important they consider each of the 20 tasks within their managerial work using a 7-point Likert scale anchored with not important at all (1) and extremely important (7).

The construct of managerial work is used to measure CEOs' emphasis on different work roles: the higher the importance ascribed to a task, the stronger the emphasis on the task. This same construct is also used to measure role ambiguity. Hall (2008) measured a corresponding concept (role clarity) by asking respondents to indicate on a 7-point Likert scale anchored with very uncertain (1) and very certain (7) the extent of their certainty about aspects of their job. In this study, the importance of CEOs' top role tasks is used to reflect role clarity or, inversely, role ambiguity: the higher the average importance of the most important tasks, the lower the role ambiguity. Mintzberg's role categories were developed to cover all intrinsic characteristics common to managerial work of all CEOs. If a CEO does not perceive any of these roles as important, his or her role ambiguity is regarded as high. For assessing ambiguity, the average importance of the five most important tasks to the CEO is calculated.

Time horizon and place of work

The time horizon of tasks conducted by CEOs describes the time dimension of managerial work, which is assumed to change in the final stages of crisis. Following the standard concepts of planning, the questionnaire first classifies managerial tasks into the following three categories: operational tasks, tactical tasks, and strategic tasks. These tasks differ from each other in their organizational scope and time horizon. Strategic tasks focus on broad and long-lasting issues. For these tasks, the time horizon set in the questionnaire is over three years. Tactical tasks are more specific and limited, with a medium-term scope specified as one to three years. Operational tasks are associated with carrying out short-term activities and have a short-term scope. These tasks are specified to correspond to annual work plans with a time-span from one month to one year. The questionnaire also includes an additional category of tasks: daily, routine tasks with a time horizon of less than one month. Thus, the question concerning the time horizon for managerial tasks encompasses four categories (0–1 month; 1 month–1 year; 1–3 years; more than 3 years). CEOs were also asked to assess the average amount of working time they spent conducting tasks in these four categories using a 7-point Likert scale anchored with none at all (1) and extremely much (7)

The place where work is conducted concerns the physical location of CEOs' work. There are different ways to measure this dimension of work. Tengblad (2002) registered work during an investigation period and divided it by the number of regular working days (cf. Carlson, 1951). In this study, CEOs were asked to assess the average amount of working time they spent in different physical locations using a 7-point Likert scale anchored with none at all (1) and a very great deal (7). Five alternative physical locations were presented for selection, mainly following Tengblad's alternatives: the CEO's own office; elsewhere inside the firm; business travel or business visits outside the firm; working at home; and elsewhere outside the firm. Tengblad (2002) also included an alternative for transportation that was excluded from the present set of alternatives. This construct allows us to compare CEOs' working time in different locations for crisis and non-crisis firms.

Importance of information

In the real world, the sources and forms of information that CEOs use are diverse and numerous. Therefore, systematization of the characteristics of information is required to connect CEOs' managerial work with the importance of information. In this study, the concept of the information perspective is used to capture the characteristics of job-relevant information. The information perspective describes sectors of information, such as the balanced scorecard (BSC) (Kaplan & Norton, 1992). The idea of the BSC is to provide a powerful set of information to top managers to help them carry out their tasks (Ittner & Larcker, 1998). The information perspective may include a large set of sectors. For example, the BSC was originally built from four sectors: financial, customer, internal process, and learning and growth (Kaplan & Norton, 1992). However, recent studies have indicated that these four sectors do not capture all sectors relevant to top managers (Chenhall, 2005; Ittner, Larcker & Meyer, 2003). Other research also suggests the sectors may not be properly justified and sufficient to cover all strategically important areas (Norreklit, 2000), which has led managers to add information sectors such as one concerning employees.

Seven different sectors of information available to CEOs were included in the questionnaire. Similar to the aims of the BSC, this variety of sectors refers here to sectors of information that together form a powerful set of information and give CEOs a comprehensive view of their business (Kaplan & Norton, 1992). The perspective is divided into seven sectors that include the four original BSC sectors (financial, customer, internal processes, and innovation and learning perspectives) and three additional sectors (supplier, competitor, and employee perspectives). The perceived importance of information from these sectors was assessed by CEOs using a 7-point Likert scale anchored with not important (1) and extremely important (7) that reflects the perceived importance of each sector to their managerial work. In addition to importance, the availability of information from different sectors for CEOs to use in their managerial work was mapped by the same seven sectors and measured using a 7-point Likert scale anchored with not available at all (1) and very good availability (7)).

Contextual and personal variables

For the cross-sectional analysis, it was important that the crisis and non-crisis firms were as similar as possible with respect to the variables that can affect the issues under investigation. These variables can be classified as contextual or organizational variables (environment and organization) and personal (CEO) variables. Many studies have shown that contextual or organizational variables can affect CEOs' managerial work and their attitudes toward information (Pfeffer & Salancik, 1978; Grover, Jeong, Kettinger & Lee, 1993; Gottschalk, 2002;

Hall, 2010). Managerial work and the importance of information also vary according to the approach of the particular CEO. This means that different CEOs emphasize different things in different ways in their work. Thus, personal factors such as values, experience, knowledge, competences, and mental models influence how CEOs approach their jobs (Stewart, 1982; Mintzberg, 1994; Gottschalk, 2002).

In this study, a large set of variables was used to check the differences between crisis and non-crisis firms in order to investigate comparability. This set includes as contextual or organizational variables measures for size, industry, strategy, PEU, level of competition, horizontal and vertical structure of the organization, formalization, family ownership and management, and exports (cf. Chenhall, 2003 for contingency variables). The strategy of firms was assessed along two different typologies: the generic strategies of Porter (1980) (cost leadership, differentiation, and focus strategies) and the market strategies of Miles and Snow (1978) (prospector, analyzer, and defender (PAD) strategies). The personal characteristics of CEOs were mapped by a set of four variables: gender, age, experience, and level of education. The measurement of the contextual and personal variables is explained in detail in Appendix 1.

METHODS

The seven research hypotheses (H1–H7) were tested using the F-test statistic to compare the expected values of the target variables between crisis and non-crisis groups of firms under the null hypothesis that they are equal. Because only the crisis and non-crisis firm groups were compared to each other, F = t2, where t is Student's t statistic. In addition, the equality of expected values of background variables with a skewed distribution (such as financial ratios) or an ordinal scale was tested by the Mann–Whitney U test, which is a nonparametric test of the null hypothesis that the populations of crisis and non-crisis firms are the same. Some of the main results were also tested by partial correlations between a crisis-group dummy variable and the variables under investigation, controlled for a set of control variables (contextual and personal variables).

The test of the research hypotheses was based on assumed univariate differences in the expected values of research variables between the crisis and non-crisis firm groups. In addition, to these separate analyses, logistic regression analysis was used as a multivariate method to investigate the efficiency of several variables together and discriminate between the two groups. This method is useful because it does not require that independent variables are multivariate normal or that groups have equal covariance matrices as required for traditional discriminant analysis (Hosmer & Lemeshow, 1989). The logistic regression model to determine the conditional probability of belonging to the crisis firm group can be expressed as follows:

$$p(Y=1|X) = \frac{1}{1+e^{-L}} = \frac{1}{1+e^{-(b_0+b_1x_1+..+b_nx_n)}}$$

Where Y = 1 and refers to the crisis status of a firm observation, X is the matrix of independent variables, L is the logit, and bi (i = 0, 1… n) are coefficients for the independent variables xi (i = 1, 2,…, n). The independent variables X were selected through a stepwise procedure based on forward conditional selection from the set of research variables.

The goodness of the model was assessed by standard tests (-2 log information measure, Cox & Snell R2, and Nagelkerke R2). The significance of the coefficients was tested by the Wald test, and the linearity of logit was tested by the Hosmer–Lemeshow test. The classification accuracy of the model was assessed by the frequencies of Type I and Type II classification errors. In addition, the accuracy ratio (AC) was extracted from the receiver operating characteristic

(ROC) curve. AC was calculated as 2(A-0.5), where A is the area under the ROC curve. If AC = 1, the accuracy of the model is perfect; if AC = 0.5, the accuracy of the model is average; if AC = 0, the model is random.

EMPIRICAL RESULTS

Contextual and personal variables

Table 3 shows statistics for the large set of contextual variables in the crisis and non-crisis firm groups used to investigate the similarity of firms. The crisis firms as a group had a median size smaller than that of the non-crisis firms but a larger average size, indicating high skewness in the size distribution. However, the firms in both groups are on average very small and thus comparable in terms of size. The industrial sector distributions do not significantly differ between the firm groups and thus do not distort comparability. However, there are differences in the generic strategies adopted: crisis firms more frequently adopted a focus strategy than non-crisis firms. Because all firms were faced with the 2008 economic downturn, this finding may indicate that firms using a focus strategy (concentration on a narrow market niche) are more vulnerable to sudden decline in demand than firms using a cost leadership or differentiation strategy.

In addition, crisis firms more frequently adopted the defender market strategy than non-crisis firms. This kind of strategy (defending existing products or markets) may, under conditions of threat, further increase vulnerability to a sharp decline in demand. The most statistically significant difference between crisis and non-crisis firms was found in the level of PEU: CEOs in crisis firms perceive higher PEU than CEOs in non-crisis firms. This is an expected finding since crisis creates uncertainty (Hall & Mansfield, 1971). Crisis firms also tend to suffer from higher levels of competition. However, the difference in this variable is not statistically significant. The centralization of authority in crisis firms also exceeds that in non-crisis firms, which is a typical response to threat (Staw, Sandelands & Sutton, 1981). In summary, there are some significant differences in contextual variables between the groups that may affect the issues under investigation. Some of the differences are, however, logical consequences of the crisis.

Table 3. Descriptive statistics of organizational variables

	Crisis firms			Non-crisis firms				
Organizational variable	Mean	Std. Dev.	Median	Mean	Std. Dev.	Median	Statistic§	p-value
Number of employees in 2008	129.9	423.6	8.5	68.7	176.0	18.0	619.000	0.178
Number of employees in 2009	115.3	350.2	13.0	80.6	196.7	19.0	682.500	0.265
Net sales in 2008	31934.2	139632.3	1006.8	17596.9	54984.2	2099.0	1410.500	0.090
Net sales in 2009	21825.9	80020.1	912.0	18054.7	55249.8	2308.5	985.000	0.024
Percentage of manufacturing firms	0.226	0.425	0.0	0.299	0.460	0.0	1824.000	0.418
Percentage of retail and wholesale firms	0.129	0.341	0.0	0.181	0.387	0.0	1866.000	0.491
Percentage of service firms	0.290	0.461	0.0	0.315	0.466	0.0	1920.000	0.791
Percentage of cost leadership generic strategy	0.129	0.341	0.0	0.165	0.373	0.0	1897.000	0.620

Percentage of differentiation generic strategy	0.355	0.486	0.0	0.528	0.501	1.0	1628.500	0.086
Percentage of focus generic strategy	0.484	0.508	0.0	0.299	0.460	0.0	1605.000	0.052
Percentage of prospector market strategy	0.194	0.402	0.0	0.268	0.445	0.0	1822.500	0.396
Percentage of defender market strategy	0.226	0.425	0.0	0.118	0.324	0.0	1756.500	0.122
Percentage of analyzer market strategy	0.419	0.502	0.0	0.512	0.502	1.0	1786.500	0.357
Level of perceived environmental uncertainty&	4.500	1.075	4.0	3.835	0.833	4.0	13.759	0.000
Level of perceived competition&	5.170	1.177	5.0	4.900	1.268	5.0	1.062	0.304
Level of decentralization&	3.060	1.340	3.0	3.650	1.179	4.0	5.735	0.018
Number of decision-making levels&	2.740	1.316	3.0	2.810	1.021	3.0	0.101	0.751
Importance of following top management's orders&	5.100	1.423	6.0	5.200	1.054	5.0	0.194	0.660
Percent of family firms	0.621	0.494	1.0	0.598	0.492	1.0	1800.500	0.389
Degree of owner involvement in management¤	5.610	2.860	7.0	6.100	2.288	7.0	1.029	0.312
Percent of exports in net sales	3.030	2.601	2.0	2.500	1.963	2.0	1770.500	0.367

Note:
§ = 2-tailed Mann–Whitney U test
& = F statistic (ANOVA): 7-step Likert scale: from 1 = very low to 7 = very high
¤ = F Statistic (ANOVA): 7-step scale: 0 = no involvement at all. 100 = management is entirely in the owners' hands (1 = 0; 2 = 1–20; 3 = 21–40; 4 = 41–60 ; 5 = 61–80; 6 = 81–99; 7 = 100)

Table 4. Descriptive statistics of personal variables

	Crisis firms			Non-crisis firms				
Personal variable	Mean	Std. Dev.	Median	Mean	Std. Dev.	Median	U statistic£	p-value
Percentage of female CEOs	0.100	0.305	0.0	0.064	0.245	0.0	1821.000	0.484
Age of CEO§	3.900	1.248	4.0	4.100	1.007	4.0	1761.000	0.341
Managerial experience of CEOs in years&	3.000	1.238	3.0	3.180	1.348	3.0	1819.000	0.502
Level of education of CEOs#	4.030	1.608	4.0	4.620	1.321	4.0	1508.500	0.064

Note:
£ = 2-tailed Mann–Whitney U test
§ = Scale: 1 = -20; 2 = 21-30; 3 = 31-40; 4 = 41-50; 5 = 51-60; 6 = 61- years

& = Scale: 1 = -5; 2 = 6-10; 3 = 11-15; 4 = 16-20; 5 = 21- years of experience
# = Scale: 1 = primary school, 2 = high school, 3 = lower vocational school degree, 4 = higher vocational school degree, 5 = lower university degree, 6 = higher university degree

Table 4 presents descriptive statistics of the four variables for CEOs' personal characteristics. The table shows that the percentage of female CEOs is higher in crisis firms than in non-crisis firms, but the difference is not statistically significant. The managers in both groups do not differ significantly with respect to age and experience. However, the average education level of CEOs is higher in non-crisis firms than in crisis firms. This finding could indicate that having a CEO with a higher level of education might make a firm less vulnerable to crisis. In summary, there are some differences in CEOs' personal characteristics (especially education level) between the crisis and non-crisis firms that may affect the issues under investigation.

Managerial-role emphasis and role ambiguity

Table 5 presents descriptive statistics for the importance of Mintzberg's managerial roles in crisis and non-crisis firms. The importance of interpersonal roles is lower in crisis firms than in non-crisis firms except for tasks 5 and 6. The interpersonal tasks 1 through 4 describe managerial work associated with social or performance situations, usually with subordinates, while task 5 describes interaction with colleagues and task 6 describes the handling of mail. The findings support hypothesis H3a for tasks 1 through 4 but not for tasks 5 and 6. This result can be explained by a typical symptom of CEOs' stress: social withdrawal associated with a tendency to maintain social support from colleagues (Weiss, 1983). Handling of mail requires no social interaction.

For informational role tasks, a statistically significant difference was found only for task 10; CEOs in crisis firms placed less importance on regularly holding discussions with their supervisor or board than CEOs in non-crisis firms did. Thus, this evidence does not support the rejection of null proposition H3c, with the exception of task 10. The lower importance given to task 10 may be a consequence of crisis and stress. Because of financial distress and a fear of social or performance situations, CEOs may perceive discussions with the board to be less important under these circumstances. In objective terms, this kind of discussion is very important.

In addition, CEOs in the crisis group tended to place less importance on decisional role tasks than their counterparts in the non-crisis group. Thus, the evidence supports proposition H3b. However, a few statistically significant differences were found, but in tasks 13 and 16 only. Task 13 is associated with supervising design and implementation of organizational projects. Under circumstances of crisis, it is understandable that a CEO would pay less attention to design and implementation of projects. Task 16 refers to conducting strategy sessions when problems arise that threaten the organization. In the same way as for task 10, CEOs may regard strategy sessions as less important than their counterparts in non-crisis firms due to financial distress and a fear of social situations under these circumstances.

Table 5. Importance of managerial roles in CEO work

Managerial role	Crisis firms			Non-crisis firms				
	Mean	Std. Dev.	Median	Mean	Std. Dev.	Median	F Statistic&	p-value
A. INTERPERSONAL ROLE VARIABLES								
1. FIGUREHEAD								
1. Present employees with prizes or certificates at ceremonies.	2.87	1.41	3.00	3.46	1.36	4.00	4.810	0.029
2. Represent the organization in outside bodies or at public functions.	3.33	1.42	3.00	4.15	1.25	4.00	10.581	0.001
2. LEADER								
3. Conduct employment, disciplinary, or appraisal interviews.	3.27	1.20	3.00	3.77	1.23	4.00	4.323	0.039
4. Hold regular meetings with subordinates.	4.03	0.89	4.00	4.54	1.13	5.00	5.497	0.020
3. LIAISON								
5. Regularly hold discussions with colleagues in other organizations.	4.10	1.00	4.00	4.08	1.21	4.00	0.008	0.929
6. Acknowledge mail from other organizations.	3.17	0.95	3.00	3.18	1.03	3.00	0.005	0.944
B. INFORMATIONAL ROLE VARIABLES								
4. MONITOR								
7. Regularly make tours of inspection around workplace.	3.37	1.43	3.50	3.24	1.45	3.00	0.192	0.661
8. Meet fellow managers to discuss mutual problems.	4.20	1.40	5.00	4.04	1.50	4.00	0.290	0.591
5. DISSEMINATOR								
9. Transmit information to subordinates or other appropriate persons in organization.	3.77	1.17	4.00	3.94	1.28	4.00	0.492	0.484
10. Hold review sessions regarding information with subordinates or other appropriate persons.	3.77	1.33	4.00	4.04	1.14	4.00	1.386	0.240
6. SPOKESMAN								
11. Regularly hold discussions with own supervisor or Board.	3.23	1.46	3.00	3.89	1.61	4.00	4.468	0.036
12. Act as expert or spokesman for section or organization.	3.87	1.11	4.00	4.18	1.44	4.00	1.281	0.259
C. DECISIONAL ROLE VARIABLES								
7. ENTREPRENEUR								
13. Supervise design and implementation of organizational projects.	4.14	1.27	4.00	4.64	1.24	5.00	4.059	0.045
14. Seek opportunities in environment to initiate improvements in organization.	4.55	1.30	5.00	4.86	1.17	5.00	1.680	0.196
8. DISTURBANCE HANDLER								
15. Adjudicate sudden conflicts (over many issues) among subordinates.	3.70	1.32	4.00	3.98	1.39	4.00	1.091	0.297
16. Hold strategy sessions when problems arise that threaten section or organization.	3.70	1.49	4.00	4.29	1.34	4.00	4.858	0.029
9. RESOURCE ALLOCATOR								
17. Set program and/or budget for section or organization and review regularly.	4.07	1.46	4.00	4.25	1.36	4.00	0.479	0.490
18. Schedule work program and review and change as needed.	3.83	1.32	4.00	4.17	1.32	4.00	1.702	0.193

10. NEGOTIATOR								
19. Represent section or organization at negotiations with outside groups such as unions or suppliers.	3.50	1.17	3.50	3.83	1.53	4.00	1.300	0.255
20. Negotiate changes in contracts or commitments with outsiders.	3.97	1.27	4.00	4.37	1.37	4.00	2.326	0.129

Note:
7-point Likert scale anchored with *not important at all* (1) and *extremely important* (7)

Table 6 presents the average importance of tasks assigned by CEOs to different Mintzberg work-role categories. For interpersonal, decisional, and all role tasks together, the importance is statistically significantly lower in crisis firms than in non-crisis firms. However, the difference in importance of the informational role tasks between the groups is not significant. The influence of crisis on the importance of the three role categories was also analyzed by partial correlations between the crisis-group dummy and the importance variables. These correlations were controlled for significant contextual and personal variables (size, focus-strategy dummy, defender-strategy dummy, authority centralization, level of education, and PEU). These partial correlations are presented in the first part of Appendix 2 (model 2). The correlations are consistent with the results obtained from a comparison of the groups. However, controlling for PEU, the partial correlation between the group dummy and the importance of decisional tasks is diminished (model 3). In summary, it is apparent that a crisis tends to reduce the importance of managerial roles, confirming hypothesis H1. More accurately, a crisis situation tends to reduce the importance of interpersonal and decisional roles but not the importance of informational roles. These findings respectively support hypotheses H3a, H3b, and H3c.

Table 6. Average importance of work-role categories perceived by CEO (average importance of the roles in each category)

	Crisis firms			Non-crisis firms				
Role task importance variable	Mean	Std. Dev.	Median	Mean	Std. Dev.	Median	F statistic	p-value&
Interpersonal managerial work-role tasks	3.51	0.83	3.58	3.87	0.77	3.83	6.483	0.012
Informational managerial work-role tasks	3.68	0.94	3.92	3.90	0.91	4.00	1.406	0.238
Decisional managerial work-role tasks	3.97	0.88	4.13	4.35	0.89	4.38	4.308	0.040
All managerial work-role tasks	3.74	0.78	3.95	4.07	0.76	4.05	4.160	0.043

Note:
7-point Likert scale anchored with *not important at all* (1) and *extremely important* (7)
& = two-tailed *p*-value for F-test

Table 7 presents the average importance of tasks among the five most important tasks, a measure that reflects role ambiguity among the CEOs surveyed. For each priority category, the average importance is lower for CEOs in crisis firms than for those in non-crisis firms. The differences are highly statistically significant for each priority category. The second part of Appendix 2 shows partial correlations for the relationship between the average importance of the top-three and top-five most important tasks and the crisis-group dummy, controlling for the significant contextual and personal variables (model 2). The partial correlations are negative and highly statistically significant, leading to the same conclusion reached when comparing the groups. Thus, evidence indicates that CEOs' role ambiguity is lower in crisis firms than in non-crisis firms, which supports hypothesis H2.

Table 7. Importance of work / role tasks most emphasized by CEOs (average importance of the tasks by priority category).

	Crisis firms			Non-crisis firms				
Role task importance variable	Mean	Std. Dev.	Median	Mean	Std. Dev.	Median	F statistic	p-value&
Importance of most important task (first in priority)	5.47	0.78	5.00	5.87	0.74	6.00	7.120	0.008
Average importance of 1–2 most important tasks	5.30	0.74	5.00	5.72	0.69	6.00	8.765	0.004
Average importance of 1–3 most important tasks	5.19	0.70	5.00	5.60	0.68	5.67	8.691	0.004
Average importance of 1–4 most important tasks	5.07	0.69	5.00	5.49	0.68	5.50	9.278	0.003
Average importance of 1–5 most important tasks	4.95	0.70	5.00	5.38	0.69	5.20	9.676	0.002
Average importance of all 20 tasks	3.74	0.78	3.95	4.07	0.76	4.05	4.160	0.043

Note:

7-point Likert scale anchored with *not important at all* (1) and *extremely important* (7)

& = two-tailed *p*-value for F-test

Time horizon and place of work

Hypotheses H4 and H5 are associated with the time horizon of CEOs' managerial tasks and the physical place in which they work, respectively. Table 8 reports how much time CEOs in crisis and non-crisis firms spend on tasks with different time horizons. It shows that CEOs in crisis firms tend to spend more time on daily tasks with a horizon of less than one month and less time on tasks with a longer time horizon. The difference between the groups is statistically significant for tasks with time horizons of one to three years (tactical tasks) and over three years (strategic tasks). This evidence supports hypothesis H4 regarding CEOs' usage of time in crisis firms. Appendix 3 (in the first part) shows partial correlations for the association between time spent on tasks with different time horizons and the crisis-group dummy, controlled for the set of significant contextual and personal variables. When these variables are controlled for, the correlations are not statistically significant (model 2). However, if this set of variables, excluding PEU (model 3), is controlled for, correlations are similar to the uncontrolled correlations (model 1), indicating that PEU is associated with crisis, which causes CEOs to spend less time on longer-term tasks. Because PEU belongs to the domain of crisis, this kind of response is typical of a CEO in a crisis firm.

Hypothesis H5 deals with the location of work. Table 9 shows how much time CEOs in crisis and non-crisis firms spend working in different physical locations. The figure averages show that CEOs in crisis firms spend less time in their offices and more time elsewhere inside and outside their firm. The difference between crisis and non-crisis firms regarding time spent in these locations is statistically significant, which supports H5. The second part of Appendix 3 reports partial correlations between the place-of-work variables and the crisis-group dummy, controlled for the significant contextual and personal variables. The level of controlled partial correlations (model 2) is slightly lower than for uncontrolled correlations (model 1). However, controlled partial correlations are statistically significant and parallel with H4. Thus, the available evidence supports hypothesis H4.

Table 8. Time spent on tasks by different time horizon

	Crisis firms			Non-crisis firms				
Time horizon of task	Mean	Std. Dev.	Median	Mean	Std. Dev.	Median	F Statistic	p-value
Less than one-month time horizon	4.66	0.97	5.00	4.41	1.02	4.00	1.455	0.229
One-month to one-year time horizon	4.34	1.08	4.00	4.58	0.84	5.00	1.815	0.179
One-year to three-year time horizon	3.69	1.11	4.00	4.19	0.99	4.00	6.389	0.012
Over three-year time horizon	3.28	1.22	3.00	3.94	1.27	4.00	7.001	0.009

Note:
7-step Likert scale anchored with *none* (1)
and *a very great deal* (7)

Table 9. Time spent on tasks in different places

	Crisis firms			Non-crisis firms				
Place of work	Mean	Std. Dev.	Median	Mean	Std. Dev.	Median	F Statistic	p-value
CEO's own office	3.73	1.20	4.00	4.38	1.30	5.00	6.669	0.010
Elsewhere inside CEO's firm	4.04	1.26	4.00	3.39	1.29	3.00	6.183	0.014
Business travel or visit outside CEO's firm	3.76	1.27	4.00	3.52	1.09	3.00	1.103	0.295
Home doing remote work for CEO's firm	3.10	1.24	3.00	3.06	1.25	3.00	0.025	0.874
Elsewhere outside CEO's firm	3.34	1.50	3.00	2.86	1.26	3.00	3.532	0.062

Note:
7-step Likert scale anchored with *none* (1)
and *a very great deal* (7)

Importance and availability of information

Hypotheses H6 and H7 are associated with the importance and availability of information to CEOs for their managerial work. The first panel of Table 10 represents the importance CEOs in crisis and non-crisis firms place on information from different sectors. In general, CEOs in crisis firms tend to place less importance on information than their counterparts in non-crisis firms, with the exception of competitor information. The most significant differences between the firm groups are the importance of the employee and internal process sectors of information. However, differences in information from the customer and financial sectors are also statistically significant. In both groups, CEOs regard customer information as the most important form. Thus, crisis firms also consider customer information the most important although it is external and deals with output (cf. D'Aveni & MacMillan, 1990). CEOs in crisis firms also place a great deal of emphasis on financial, employee, and innovation and learning information (internal input information).

The comparison of the importance of information in crisis and non-crisis firms supports H6 although it does not deal with information on internal processes. The first panel of Appendix 4 presents partial correlations between the importance of information from different sectors and the crisis-group dummy controlled for the set of control variables. This appendix shows that controlled partial correlations (model 2) are, for the most part, more similar than uncontrolled correlations (model 1), which partly supports prior conclusions above and H6. However, the controlled correlation between the importance of financial information and the crisis-group dummy is not statistically significant. This evidence indicates that CEOs in crisis firms place less importance on customer and employee information than their counterparts in non-crisis firms supporting H6. The findings do not support the same suggestion in terms of financial information. Statistical analyses (not reported here) show that the importance of financial information is negatively correlated with the focus-strategy dummy (-0.146) and the defender-strategy dummy (-0.161) used as control variables. Thus, the importance of financial information is associated more with strategy than with crisis.

Table 10. Importance and availability of information from different sectors

	Crisis firms			Non-crisis firms				
Information sector	Mean	Std. Dev.	Median	Mean	Std. Dev.	Median	F Statistic	p-value
1. Importance of information if available§								
Financial sector	5.43	1.01	5.50	5.78	0.94	6.00	3.493	0.063
Customer sector	5.80	0.96	6.00	6.14	0.77	6.00	4.773	0.030
Supplier sector	4.77	1.65	5.00	5.12	1.29	5.00	1.786	0.183
Competitor sector	4.67	1.24	5.00	4.62	1.24	5.00	0.032	0.858
Employee sector	5.33	1.30	5.50	5.87	0.90	6.00	8.172	0.005
Internal processes sector	4.90	1.52	5.00	5.48	0.97	6.00	7.693	0.006
Innovation and learning sector	5.40	1.25	6.00	5.64	1.06	6.00	1.298	0.256
2. Availability of information&								
Financial sector	5.03	1.00	5.00	5.72	0.92	6.00	13.886	0.000
Customer sector	4.31	1.04	5.00	4.83	0.84	5.00	8.975	0.003
Supplier sector	4.10	1.11	4.00	4.51	1.11	5.00	3.302	0.071
Competitor sector	3.79	1.08	4.00	3.98	1.12	4.00	0.690	0.407
Employee sector	4.40	1.25	4.50	5.06	0.83	5.00	13.815	0.000
Internal processes sector	4.40	1.10	4.50	4.79	1.02	5.00	3.636	0.058
Innovation and learning sector	3.93	1.14	4.00	4.41	1.03	4.00	5.464	0.020

Note:
§ = 7-point Likert scale anchored with *not important at all* (1) and *extremely important* (7)
& = 7-point Likert scale anchored with *not available at all (1)* and extremely available

Hypothesis H7 is related to the availability of information from different sectors. The second part of Table 9 reports the availability of information to CEOs in crisis and non-crisis firms. For CEOs in crisis firms, the level of information availability is significantly lower than for CEOs in non-crisis firms, with the exception of competitor information (with the lowest level of availability). The differences are most significant for information from the financial, employee, and customer perspectives, which supports H7. The second panel of Appendix 4 presents partial correlations for the availability of information from different sectors and the crisis-group dummy controlled for the set of control variables. These results (model 2) show that only the partial correlations for financial, customer, and employee information are statistically significant. The results also show that the level of partial correlations is significantly higher when PEU is excluded from the set of control variables (model 3). Thus, PEU is an important variable affecting the availability of information as perceived by CEOs. In summary, there is strong evidence supporting H7.

Logistic regression

Empirical evidence supports the research hypotheses, which indicates there are significant differences in CEOs' behavior in crisis and non-crisis firms. However, this univariate evidence does not tell us how well these differences as a whole discriminate between crisis and non-crisis firms. Table 11 presents the results of a multivariate stepwise logistic regression analysis where all the original variables under investigation are used as predictors. The resulting logistic regression model is reported in Panel 2. The panel shows that the final model includes five predictors indicating that the likelihood of belonging to the group of crisis firms is higher, the lower a CEO assesses the importance of holding strategy sessions when problems arise that threaten the section or organization, the less time a CEO spends on strategic tasks, the more time a CEO spends elsewhere than in the firm's offices, and the lower the availability of employee and financial information. The goodness of the model fit is quite high (Panel 1), and the logistic model correctly classified 76.4% of the firms (Panel 3). Figure 1 shows the ROC curve for the model. The accuracy ratio (AR) for the model is 0.662, indicating above average accuracy.

Table 11. Estimation results of logistic regression analysis

Panel 1. Model Summary

-2 Log Likelihood	104.118
Omnibus test on model coefficients. Chi-Square	44.516
p-value	0.000
Cox & Snell R Square	0.227
Nagelkerke R Square	0.358
Hosmer and Lemeshow test statistic	12.132
p-value	0.145

Panel 2. Estimated logistic regression model

Variables in the Equation	B coefficient	Stand. Error	Wald statistic	p-value	Exp(B)
Task 16. Hold strategy sessions when problems arise that threaten section or organization	-0.340	0.199	2.905	0.088	0.712
Time spent on tasks for over three years	-0.341	0.213	2.569	0.109	0.711
Working elsewhere inside the CEO's firm	0.551	0.203	7.392	0.007	1.736
Availability of employee information	-0.580	0.259	5.029	0.025	0.560
Availability of financial information	-0.752	0.257	8.562	0.003	0.472
Constant	5.986	1.921	9.709	0.002	397.623

Panel 3. Classification based on predicted probability (cut-off value = 0.19)

	Predicted class:	
Original class:	Non-crisis firms	Crisis firms
Non-crisis firms	75.89%	24.11%
Crisis firms	21.43%	78.57%
Overall		76.43%

Appendix 5 presents a similar logistic regression model including PEU as an additional predictor. The goodness of the model fit is then slightly improved (Panel 1), but the classification accuracy is almost identical (Panel 3). The coefficient of PEU is positive and highly statistically significant (Panel 2). The coefficients of other predictors and their significance are comparable with those in the original model, with one exception: the variable measuring how much time a CEO spends on strategic tasks is no longer significant. Thus, PEU does little to increase the performance of the logistic regression model and merely substitutes the information contained by this variable. This result was expected given the univariate results.

DISCUSSION AND SUMMARY

Discussion

This study suggests that crisis situations have several consequences for the management of firms that must adapt to external threats that radically alter the business environment and financial situation. In small and medium enterprises (SMEs), CEOs play central roles: they have a great deal of power to make and implement decisions but also have many responsibilities toward stakeholders such as employees and financiers. Generally, CEOs are also owners of their firms and thus financial risk can affect their personal property. Accordingly, the threat of a crisis puts CEOs in a very difficult situation as they are surrounded by internal and external tensions, causing them to become increasingly stressed during the process of decline toward crisis (cf. Staw, Sandelands & Dutton, 1981). In this study, it is expected that this adaptation causes CEOs to adjust their emphasis on managerial work roles, leading to differences between crisis and non-crisis firms in general (H1). It is further suggested that this transitory situation makes CEOs uncertain about their role as chief executive. This kind of uncertainty is expected to result in increased role ambiguity (H2), which can have many negative personal consequences for CEOs (Marginson, 2006).

These hypotheses are strongly supported by empirical evidence since CEOs in crisis firms generally place less emphasis on Mintzberg's role tasks than their counterparts in non-crisis firms. In addition, they place less emphasis on the tasks at the top of their priority list, reflecting greater role ambiguity. While many believe these differences are due to differences in contextual environment or personal characteristics, the findings remain valid when controlling for a large set of contextual and personal variables. The findings were also validated by the inclusion in the survey of a control question about how sure a CEO is about his or her philosophy of leading (results not reported here): CEOs in crisis firms were highly statistically significantly less sure about their philosophy than their counterparts in non-crisis firms. Control questions also revealed that CEOs in crisis firms work more hours per week and are less satisfied with the distribution of working hours on different tasks. However, these questions did not directly investigate how CEOs in crisis and non-crisis firms differ with respect to personality traits and levels of stress. These aspects would be interesting to investigate in further studies.

It is also interesting to examine how CEOs in crisis and non-crisis firms emphasize Mintzberg's (1973) various role categories. Interpersonal roles are concerned with interpersonal relationships (managing through people), informational roles with information aspects (managing through information), and decisional roles with decision making (managing through action). This study suggests that CEOs suffer from typical symptoms of stress such as fear of social situations with subordinates and indecisiveness (Staw, Sandelands & Dutton, 1981; Weiss, 1983). It is suggested that these symptoms lead CEOs in crisis firms to place less emphasis on interpersonal and decisional roles (propositions H3a and H3b). However, it is difficult to specify how a crisis will affect the emphasis on informational roles because it may lead to information overload, restriction of information processing, or even freezing on well-known practices (Staw, Sandelands & Dutton, 1981). Therefore, it is suggested as a null hypothesis that CEOs in crisis and non-crisis firms place equal emphasis on informational roles (proposition H3c).

Evidence also supports these propositions when controlling for a set of contextual and personal variables. The importance of interpersonal tasks is lower for CEOs in crisis firms when these tasks deal with social or performance situations with subordinates. However, when the tasks deal with interaction with colleagues, the emphasis placed on them does not differ between CEOs in crisis and non-crisis firms. This may be a consequence of the need to maintain social support from colleagues (Weiss, 1983). In general, CEOs in crisis firms assign less importance to decisional role tasks. However, significant differences are found only when the tasks deal with either supervising organizational projects or holding strategy sessions with the board. Under crisis circumstances, organizational projects can be frozen and fear of performance situations may cause CEOs to avoid sessions with the board. Only one informational role task is significantly different between the firm groups: CEOs in crisis firms place less emphasis on regular discussions with their supervisor or board. This is obviously a consequence of a fear of social situations. The assumption about fear of social situations was controlled for by a survey question (not reported here) about how important CEOs consider telling subordinates they have performed good work. CEOs in crisis firms consider this less important than their counterparts in non-crisis firms to a high degree of statistical significance. An additional control question (not reported here) showed that CEOs in crisis firms spend less time in meetings with other people than their counterparts in non-crisis firms.

It is expected that crisis alters the time horizon of managerial tasks accomplished by CEOs. In the final stages of organizational decline, limits on CEOs' time and attention guarantee that not all issues will be attended to equally (Dutton, 1986). It is suggested (H4) that CEOs' prioritization of tasks changes under circumstances of crisis from long-term time-horizon tasks toward short-term time-horizon tasks (Smart & Vertinsky, 1977; D'Aveni, 1989; D'Aveni & MacMillan, 1990). Evidence provides obvious support for this hypothesis. In crisis firms, CEOs spend less time on managerial tasks with a horizon of one to three years (tactical tasks) and over three years (strategic tasks). However, control analysis indicates that this difference is due to the higher PEU perceived by CEOs in crisis firms. Accordingly, high PEU makes long-term tasks less attractive to CEOs, but also makes long-term planning more difficult. The survey also investigated this issue with a control question (not reported here) that asked how much time CEOs spend on planning tasks in general. The results show that CEOs in crisis firms spend less time on planning tasks than their counterparts in non-crisis firms. However, CEOs in crisis and non-crisis firms spend equal time on the control tasks. Due to high PEU, one would expect them to spend more time on such tasks (Staw, Sandelands & Dutton, 1981).

It is also expected that crisis influences the locations where CEOs conduct their work. In the final stages of decline, CEOs may be strongly oriented toward results, which means they are intensely motivated to spend less time in the office (H5). Evidence provides strong support for this hypothesis, even when controlling for a set of contextual and personal variables. Evidence shows that CEOs in crisis firms tend to spend less time in the office and more time elsewhere, whether inside or outside the firm. This finding is also supported by the relatively high importance CEOs place on the tasks of holding discussions with colleagues in other organizations and meeting fellow managers to discuss mutual problems, behavior related to searching for social support from colleagues. The tendency to work outside the office is supported by the highest importance given to the task of seeking opportunities to initiate improvements in an organization. This task is also strongly acknowledged by CEOs in non-crisis firms. This finding is expected since non-crisis firms also suffered from effects of the Great Recession.

Information is the first link in the chain of perceptions and actions that permit an organization to adapt (Daft, Sormunen & Parks, 1988). The threat-response model argues that CEOs' stress changes their information-processing patterns and generates increased search behavior, which can result in information overload (Staw, Sandelands & Dutton, 1981; D'Aveni & MacMillan, 1990). This overload can cause CEOs to restrict information sectors and turn their attention to simplistic efficiency concerns (D'Aveni & MacMillan, 1990). However, it has been suggested that SMEs in crisis suffer from the lack of apposite information rather than information overload (Lybaert, 1998). It is suggested that CEOs in crisis firms place less importance on critical success factors (financial, customer, and employee information) than their counterparts in non-crisis firms (H6). Further, it is suggested that the availability of such information is lower for CEOs in crisis firms (H7).

Evidence supports H6 in so far as CEOs in crisis firms place less importance on financial, customer, and employee information than CEOs in non-crisis firms. However, the importance of financial information is undermined by the strategy control variables. CEOs in firms using a generic focus strategy or a defender market strategy consider financial information less important, irrespective of the degree of crisis. There is also evidence supporting H7. The availability of information to CEOs in crisis firms is generally lower than for their counterparts in non-crisis firms. The most significant differences are found in financial, customer, and employee information, which confirms H7. However, it was also found that PEU is an important control variable: when the results are controlled for PEU, the association between crisis and the availability of information is weaker. This result is in agreement with contingency research on the importance of PEU (Chenhall, 2003). The availability of information was also verified by the inclusion of two control questions (not reported here) in the survey. CEOs in crisis firms were found to be significantly less satisfied with the information available to them than their counterparts in non-crisis firms. In addition, CEOs in crisis firms were found to be significantly less aware of the latest issues affecting their organization than CEOs in non-crisis firms.

Conclusions

In summary, the results indicate that crisis has a strong impact on CEOs' behavior with respect to the importance of managerial work and different sectors of information. These findings show that CEOs in crisis firms facing difficult financial circumstances tend to exhibit less role ambiguity and greater avoidance of interpersonal and decisional roles than their counterparts in non-crisis firms. They place less emphasis on information from different sectors and suffer more from lack of information, spending less time on planning and long-term tasks in general. They also spend more time outside their offices. These variables are also useful in identifying crisis firms. If these variables are concurrently included in multivariate logistic regression analysis, it is possible to classify firms in crisis and non-crisis groups with considerable accuracy. Therefore, these variables together form an important set for characterizing the behavioral differences between CEOs in crisis and non-crisis firms. Particularly, time spent outside the office and the perceived availability of financial and employee information play important roles in discriminating between the groups.

The present study contributes to theory and practice in many ways, particularly in showing how CEOs behave when threatened with a sudden and unexpected crisis. These findings can help managers and researchers better understand this behavior and to learn and develop methods to diminish unfavorable behavior to reduce, or even avoid, the impacts of a crisis. It is expected that these findings are relatively general and could be generalized for CEOs outside Finland. Finnish leadership is often described by the concept Management by Damn (Lämsä, 2010). This means that Finnish leaders are strong and authoritative, ultimately bearing the responsibility and ability to make large decisions alone and emphasizing their role as leaders. In Finnish organizations, it is important that the CEO is present and available because employees are accustomed to the leader always being accessible when needed. Finnish managers appreciate performance, are often impatient and honest, do not favor small talk, and are not afraid to say negative things (Lämsä, 2010). It is interesting that solving problems and handling chaotic circumstances are normal for Finns. A task will often begin although exact plans have not yet been fully finalized. These features may be unique to Finnish CEOs so it is possible that these features affect the way Finnish CEOs behave when threatened with a sudden crisis. However, it is expected that the differences in behavior between CEOs in crisis firms and those in non-crisis firms are largely generalizable to other cultures outside Finland.

The present study has several limitations, which can serve as suggestions for further research on crisis firms. This study is based on survey data and suffers from the standard weak points of such an approach (Van der Stede, Young & Chen, 2005). In further studies, different methodologies should also be applied. Particularly, time-series analysis would be useful to verify the suggested causal relationships (cf. D'Aveni & MacMillan, 1990). The survey was completed only by Finnish CEOs, who may have special characteristics such as a hard leadership style. Therefore, studies focusing on CEOs from other countries would be able to assess whether the findings can truly be generalized. In this study, a direct measure of role ambiguity or role clarity was not available (Marginson, 2006). The status of crisis was identified on the basis of CEOs' assessments of their firms' financial performance in relation to competitors. More accurate measures of role ambiguity and crisis should be applied in further studies. The hypotheses of this study are associated with the stress-related behavior of CEOs in crisis firms. However, the level of stress was not directly measured in any way. Finally, it would be interesting to measure CEOs' personalities in further research. It is expected that symptoms of stress are largely associated with different personality traits.

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APPENDICES

Appendix 1. Survey questions on the variables used in the study

Managerial work role

How important do you consider the following 20 tasks in your managerial work? (Use the following scale to assess importance: 1 = no importance at all, 2 = very little importance, 3 = moderately little importance, 4 = average importance, 5 = moderate importance, 6 = considerable importance, 7 = extreme importance)

(For the 20 managerial tasks, see Table 4)

Time horizon of tasks

How much of your working time do you spend on average conducting tasks in the following four categories? (Use the following scale to assess time spent: 1 = none at all, 2 = very little, 3 = moderately little, 4 = average, 5 = moderate, 6 = very much, 7 = extremely much)

a. Daily tasks (time horizon of 0–1 month)
b. Operational tasks (time horizon of 1 month–1 year)
c. Tactical tasks (time horizon of 1–3 years)
d. Strategic tasks (time horizon of more than 3 years)

Place of work

How much of your working time do you spend on average in the following places? (Use the following scale to assess importance: see question 2)

a. Your own office
b. Elsewhere inside your firm
c. Business travel or business visits outside your firm
d. At home working for your firm
e. Elsewhere outside your firm

The importance of different sectors of information

How important do you consider the following sectors of information to your managerial work if they are available? (Use the following scale to assess importance: see question 1)

a. Financial perspective (financial performance, profitability, growth, liquidity, solvency)
b. Customer perspective (customer satisfaction, loyalty, customer relationships, product price, quality, markets)
c. Supplier perspective (quality of delivery, reliability, speed, elasticity)
d. Competitor perspective (aggressiveness, performance, strategy, products)
e. Employee perspective (employee motivation, satisfaction, elasticity, competence)
f. Internal processes perspective (process performance, through-put time, quality, reliability)

g. Innovation and learning perspective (ability to innovate, develop, learn, and improve activities)

The availability of different sectors of information

How would you assess the availability of the following sectors of information in your managerial work? (Use the following scale to assess availability: 1 = not available at all, 2 = very poor availability, 3 = moderately poor availability, 4 = average availability, 5 = moderately good availability, 6 = very good availability, 7 = extremely good availability)

(For the different perspectives, see question 4)

Contextual variables

a. Size: measured from financial statements)
b. Industry: What is the main industry sector of your firm? (Pick one: manufacturing, trade, service, construction, transport, other industry)
c. Generic strategy: How would you specify your firm's main generic strategy to achieve competitive advantage? (Pick one: Cost leadership: To produce products and services at the lowest prices, Differentiation: To produce clearly different and unique products and services, Focus: To focus on a narrow market niche, for example, a narrow customer group, narrow product line, or narrow geographical area)
d. Market strategy: How would you label your firm's main market strategy? (Pick one: Prospector: The firm is continuously investing in new markets and the development of new products and wants to be a pioneer in its business area, Defender: The firm is continuously defending its present market position and existing products and wants to improve its efficiency to produce existing products and services, Analyzer: The firm shares characteristics of a prospector and a defender and mirrors both types to some degree)
e. Perceived environmental uncertainty (PEU): What is the expected level of accuracy when you predict changes in the business environment of your firm for a 2-to-4-year horizon? (Pick one: 1 = extremely low, 2 = very low, 3 = moderately low, 4 = average, 5 = moderately high, 6 = very high, 7 = extremely high)
f. Competition: How would you assess the strength of competition in your business area? (Scale: see question 6.e.)
g. Decentralization (horizontal structure of organization): How would you assess the degree of decision-making decentralization in your firm at the moment? (Scale: see question 6.e.)
h. Decision-making levels (vertical structure of organization): How many different decision-making levels (e.g., top management, middle management, lower management, or supervisors) does your firm have? (Pick one: 1 = extremely few, 2 = very few, 3 = moderately few, 4 = average, 5 = quite many, 6 = very many, 7 = excessively many)
i. Orders (formality of organization): How important do you consider following the instructions of top management in your firm? (Scale: see question 1)
j. Is your firm a family firm (more than 50% of the firm is owned by family members)? (Pick one: 0 = No, 1 = Yes)
k. Owner involvement in management: What is the degree of owners' involvement in the management of your firm? 0 = no involvement at all, 100 = management is entirely in the owners' hands. (Pick one: 1 = 0, 2 = 1-20, 3 = 21-40, 4 = 41-60, 5 = 61-80, 6 = 81-99, 7 = 100)
l. Export: How much has your firm exported as a percentage of sales on average during the last three years? (Pick one: 1 = 0, 2 = 1-10, 3 = 11-20, 4 = 21-30, 5 = 31-40, 6 = 41-50, 7 = 51-60, 8 = 61-70, 9 = 71-100)

Personal variables
Please specify the following personal information:

a. Gender: What is your gender? (Pick one: male, female)
b. Age: How old are you? (Pick one: 1 = < 20, 2 = 21-30, 3 = 31-40, 4 = 41-50, 5 = 51-60, 6 = 61- years)
c. Management experience: What is the length of your experience in managerial work in general? (Pick one: 1 = <5, 2 = 6-10, 3 = 11-15, 4 = 16-20, 5 = 21- years)
d. Education level: What is the level of your education? (Pick one: 1 = primary school, 2= high school, 3 = lower vocational school degree, 4 = higher vocational school degree, 5 = lower university degree, 6 = higher university degree)

Appendix 2. Pearson correlations for the importance of managerial task variables and the crisis-group dummy

Variables	Model 1	p-value	Model 2	p-value	Model 3	p-value
1. Role category importance measures						
Average importance of all tasks	-0.173	0.043	-0.163	0.087	-0.188	0.047
Average importance of interpersonal role	-0.203	0.012	-0.145	0.129	-0.175	0.065
Average importance of informational role	-0.098	0.238	-0.113	0.237	-0.132	0.165
Average importance of decisional role	-0.172	0.040	-0.165	0.084	-0.183	0.054
2. Role-ambiguity measures						
Average importance of 1-3 most important tasks	-0.232	0.004	-0.246	0.009	-0.252	0.007
Average importance of 1-5 most important tasks	-0.244	0.002	-0.261	0.006	-0.263	0.005

Note:
Model 1: Pearson correlation with crisis-group dummy without control variables
Model 2: Pearson partial correlation with crisis-group dummy controlled for net sales in 2009,
focus-strategy dummy, defender-strategy dummy, centralization, level of education, and PEU
Model 3: Pearson partial correlation with crisis-group dummy controlled for net sales in 2009,
focus-strategy dummy, defender-strategy dummy, centralization, and level of education

Appendix 3. Pearson correlations for time horizon and place-of-work variables and the crisis-group dummy

Variables	Model 1	p-value	Model 2	p-value	Model 3	p-value
1. Time-horizon variables						
Tasks for less than one month time horizon	0.107	0.185	0.088	0.345	0.145	0.118
Tasks for one-month-to-one-year time horizon	-0.107	0.184	-0.095	0.307	-0.099	0.287
Tasks for one-year-to-three-year time horizon	-0.214	0.007	-0.097	0.299	-0.188	0.041
Tasks for over-three-year time horizon	-0.204	0.011	-0.071	0.447	-0.171	0.063

2. Place-of-work variables						
CEO's own office	-0.221	0.005	-0.159	0.087	-0.172	0.062
Elsewhere inside CEO's firm	0.184	0.025	0.173	0.063	0.151	0.103
Business travel or visits outside CEO's firm	0.088	0.275	0.070	0.456	0.124	0.179
Home doing remote work for CEO's firm	0.032	0.690	0.109	0.240	0.069	0.456
Elsewhere outside CEO's firm	0.192	0.018	0.196	0.034	0.218	0.018

Note:
Model 1: Pearson correlation with crisis-group dummy without control variables
Model 2: Pearson partial correlation with crisis-group dummy controlled for net sales in 2009,
focus-strategy dummy, defender-strategy dummy, centralization, level of education, and PEU
Model 3: Pearson partial correlation with crisis-group dummy controlled for net sales in 2009,
focus-strategy dummy, defender-strategy dummy, centralization, and level of education

Appendix 4. Pearson correlations for importance and availability of information from different sectors and the crisis-group dummy

Variables	Model 1	p-value	Model 2	p-value	Model 3	p-value
Panel 1. Importance of information if available						
Financial sector	-0.187	0.022	-0.099	0.287	-0.105	0.258
Customer sector	-0.186	0.023	-0.180	0.053	-0.221	0.016
Supplier sector	-0.109	0.184	-0.061	0.511	-0.098	0.293
Competitor sector	0.003	0.974	-0.003	0.978	0.005	0.959
Employee sector	-0.240	0.003	-0.308	0.001	-0.318	0.000
Internal processes sector	-0.253	0.002	-0.262	0.004	-0.302	0.001
Innovation and learning sector	-0.100	0.224	-0.071	0.444	-0.124	0.182
Panel 2. Availability of information						
Financial sector	-0.313	0.000	-0.227	0.014	-0.258	0.005
Customer sector	-0.284	0.000	-0.211	0.023	-0.252	0.006
Supplier sector	-0.175	0.033	-0.091	0.330	-0.144	0.120
Competitor sector	-0.095	0.250	-0.013	0.891	-0.088	0.341
Employee sector	-0.273	0.001	-0.277	0.002	-0.305	0.001
Internal processes sector	-0.166	0.044	-0.120	0.198	-0.151	0.104
Innovation and learning sector	-0.193	0.019	-0.057	0.539	-0.146	0.116

Note:
Model 1: Pearson correlation with crisis-group dummy without control variables
Model 2: Pearson partial correlation with crisis-group dummy controlled for net sales in 2009.
focus-strategy dummy, defender-strategy dummy, centralization, level of education, and PEU
Model 3: Pearson partial correlation with crisis-group dummy controlled

for net sales in 2009,
focus-strategy dummy, defender-strategy dummy, centralization, and level of education

Appendix 5. Estimation results of logistic regression analysis with PEU as a predictor for crisis-group dummy

Panel 1. Model Summary

-2 Log Likelihood	95.597
Cox & Snell R Square	0.272
Nagelkerke R Square	0.431
Hosmer and Lemeshow test statistic	3.75
p-value	0.879

Panel 2. Estimated logistic regression model

Variables in the Equation	B coefficient	Stand. Error	Wald statistic	p-value	Exp(B)
Task 16. Hold strategy sessions when problems arise that threaten section or organization	-0.354	0.210	2.851	0.091	0.702
Time exceeding three years spent on tasks	-0.130	0.230	0.321	0.571	0.878
Working elsewhere inside the CEO's firm	0.599	0.215	7.772	0.005	1.821
Availability of employee-perspective information	-0.597	0.267	4.994	0.025	0.551
Availability of financial-perspective information	-0.761	0.261	8.497	0.004	0.467
PEU	0.839	0.301	7.755	0.005	2.314
Constant	1.674	2.388	0.491	0.483	5.331

Panel 3. Classification based on predicted probability (cut-off valu

Original class:	**Predicted class:** Non-crisis firms	Crisis firms
Non-crisis firms	76.79%	23.21%
Crisis firms	25.00%	75.00%
Overall		76.43%

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An Empirical Investigation of Capital Structure Strategies Adopted by Botswana Firms – An Exploratory Study

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Abstract

The paper is set on the theoretical backdrop of the importance and exigency of capital structure in firms' pursuits to maximize shareholders' wealth. The study investigates the different capital structure strategies adopted by Botswana firms. In its methodology, the study adopted an approach used by Graham and Harvey [1] in developing the research instrument. The study methodology used is premised on the presupposition that issues of capital structure are more pronounced with the increase in firm size, with the largest firms generally being those listed on the stock exchange. Primary data was collected from a small sample of firms listed on the Botswana Stock Exchange (BSE), in keeping with the exploratory nature of the study. The results were indicative of lack of theoretical considerations in the adoption and application of capital structure strategies by management across the listed firms. While most firms preferred using external equity as a financing option, followed by retained earnings, debt was found to be the least preferred financing option. Also found was that management was generally knowledgeable of the benefits associated with debt financing, and in particular the tax-deductibility of the cost of debt and reduction of agency costs. Overall, the findings were puzzling when juxtaposed with the theoretical perspectives of the trade-off theory, the pecking order theory and agency costs theory. The study concludes by suggesting further research to uncover the extent to which these preliminary results are applicable and uncovering the underlying rationality.

Keywords: Capital structure, Stock Exchange, Equity, Debt, Retained earnings, Exploratory study

INTRODUCTION

The literature alludes to the role and importance of financial ethos and management in the operations, performance and sustainability of organisations [2, 3]. While financial ethos and financial management, as constructs, cover a wide spectrum, there is considerable consensus in the literature to suggest that capital structure is one of those common-denominator factors that have a multiplier effect in the determination of the performance of other key organisational indicators and hence defines organisational dexterity both in the short- and long-term [4, 5]. Consequently, the financial soundness of firms and their longevity can be attributable to how aptly an organisation sources and uses its funds, among other factors. In this respect, capital structure is an important subject matter and the research on how firms can improve on, or ideally achieve, optimal capital structure levels, are warranted. Intuitively, the larger the size of a firm the bigger would be the expected marginal returns from an optimal capital structure.

The literature provides a myriad of strategies that firms could potentially adopt to formulate their capital structures, with each strategy bequeathed with its own pros and cons [4]. With the advent of the trade-off condition that exists with the choice of one strategy over another, it would be expected that management engages some cost-benefit method to ascertaining, choosing and adopting a particular capital structure strategy. Moreover, these firms would also be expected to periodically evaluate the efficacy of their chosen strategies and undertake all necessary adjustments.

To the extent that these capital structure strategies are well implemented, the overarching goal would be to maximize shareholders' wealth. However, capital structure and financial performance have been studied worldwide with varied results [6]. For example, the impact of capital structure on financial performance of Ghanaian listed banks reveals that increasing the amount of long-term debt would result in a decrease in the profitability of the firms [6]. Abor [7] examined the effect of capital structure on the financial performance of small and medium-sized enterprises (SMEs) in Ghana and South Africa. The overall results indicate that capital structure, especially long-term and total debt ratios negatively affect performance of SMEs. Within an industry, if a firm maintains high leverage, as such attempting to compete on the basis of innovation, this results in diminished performance [3]. The negative relationship between leverage and profitability has also been documented in other studies [8-11]. Meanwhile, quite a good number of studies have found a positive relationship between debt and profitability [12-14]. However, due to its extensive research, the relationship between capital structure and firm performance is not of much concern in this paper, but rather the nature and form of capital structure strategies or policies adopted by Botswana enterprises.

This paper is a preliminary study on the insights of the decision-makers in considering and determining capital structure strategies. Of particular interest to the study is the degree to which capital structure considerations by decision-makers are aligned to the established theoretical underpinnings of (i) the trade-off theory, (ii) the pecking order hypothesis and (iii) the agency costs theory. The focus of the study is therefore directed at soliciting management insights on their knowledge of the theoretical underpinnings of capital structure and the application of the same.

REVIEW OF RELATED LITERATURE

Capital structure is defined as the 'the mix of securities and financing sources used by corporations to finance real investment' [15, p81]. In essence, capital structure refers to the manner in which firm sources all the finances required to fund its operations, fixed assets and investments. Conventionally, the financial instruments used to source funds fall in two broad categories of equity and debt, although the recent past has witnessed an increase in the more complex hybrid instruments. The literature alludes to different reasons why management should prefer one form of financial instrument over another, or a particular combination over another [2]. Overall, different capital structure strategies have different implications to the operations and financial performance of the firm. Next is a discussion of some of the notable theoretical approaches to capital structure strategies.

Capital Structure

Capital structure has been a widely researched topic ever since Modigliani and Miller [16]'s seminal work on capital structure irrelevance theory. Modigliani and Miller [16] argued and proved that the choice between debt and equity financing has no material effect on the value of the firm, or on the cost or availability of capital. However, they assumed perfect and frictionless capital markets in which financial innovation would quickly extinguish any deviation from their predicted equilibrium. Even though their assumptions have raised a lot of criticism [17], the logic of their findings has widely been accepted. For example, Naidu [4] submitted that after an intense debate for a period of two decades, it is generally accepted today that the degree of financial leverage is not inconsequential and therefore an optimum capital structure does exist, particularly when taxes, bankruptcy costs and agency costs are considered. As thus, optimal capital structure would involve trade-off between the tax advantage of debt and various leverage related costs. The end result of these model extensions was the recognition that the existence of optimal capital structure is essentially an empirical issue [5].

It is on this backdrop that many researchers were motivated to find evidence of the existence of leverage related costs, which eventually led to determinants of capital structure and its strategies. But then, the overarching question is 'how well defined are capital structure strategies adopted by firms' and 'can these strategies be explained by existing theories'?

Theoretical Considerations

Modigliani and Miller [16] irrelevance theory suggested that firm value is independent of its financial structures. Subsequently, Modigliani and Miller [18], after taking consideration of corporate tax, underlined the effects and benefits of the tax shield of debt; recognising that leverage can reduce the payment obligations related to corporate tax. The study opined that capital structure is optimal at 100% debt financing, and the idea that was formulated marked the starting point in laying the foundation for the capital structure debates. According to Myers [15], most of the research on capital structure has focused on the proportions of debt versus equity, as observed on the right-hand side of corporations' balance sheets. Despite this, there is no universal theory of the debt-equity choice and hence several useful conditional theories have been used, and most prominently the trade-off theory, the pecking order hypothesis and the agency theory.

The trade-off theory argues that firms seek debt levels that balance the tax advantages of additional debt against the costs of possible financial distress. The trade-off theory predicts moderate borrowing by tax-paying firms [15]. Conversely, the pecking order hypothesis argues that the firm will borrow, rather than issuing equity, when internal cash flow is not sufficient to fund capital expenditures. Thus, the amount of debt will reflect the firm's cumulative need for external funds [15]. The theory thus assumes that firms follow the financial hierarchy consistent with the Pecking Order Model, relying initially on retained earnings, then debt finance and finally using external equity financing as the last resort [19]. The central friction in the Pecking Order Model of capital structure is the asymmetric information between managers and the less-informed outside investors. Myers and Majluf [20] illustrated how this asymmetry lead firms to prefer internal funds to external funds. The pecking order hypothesis also makes predictions about the maturity and priority structure of debt. Thus securities with the lowest information costs should be issued first, before the firm issues securities with higher information costs. This suggests that short-term debt should ideally be exhausted before the firm issues long-term debt [21].

The agency cost theory argues that dangerously high debt levels will increase the value of a firm, despite the threat of financial distress, when a firm's operating cash flow significantly exceeds its profitable investment opportunities [15]. Free cash flow is cash flow in excess of that required to fund all projects that have positive net present values when discounted at the relevant cost of capital [22]. According to Jensen and Meckling [23], an agency relationship is a contract under which the principal engages the agent to perform some service on their behalf which involves delegating some decision making authority to the agent. This creates a problem known as principal-agent problem and it eventually has influence on the ownership structure (capital structure of the firm). As a result, conflicts of interest between shareholders and managers over pay-out policies are especially severe when the organization generates substantial free cash flow. The problem is how to motivate managers to disgorge the cash rather than investing it at below the cost of capital or wasting it on organization inefficiencies. Use of debt can discipline managers to focus more on profitability as it comes with need to pay interest and principal but there is possibility of increased financial distress.

In sum, and according to Myers [15], the trade-off theory emphasizes taxes, the pecking order hypothesis emphasizes differences in information, and the agency cost theory's point of emphasis is free cash flow.

Research on Capital Structure Strategies in Africa and Emerging Markets

Most of the previous research on capital structure strategies has been conducted in developed economies and studies on the African continent have been limited. Among the few studies in Africa, Naidu [4] conducted a study on Australian and South African firms. Even though the study postulated that the industry effect on aggregate financial leverage was not observed in a sample of firms, the industry effect on other forms of leverage such as short-term leverage were not ruled out. Specifically, this industry influence was observed on South African firms. This finding is of peculiar interest to this study, especially the aspect of country factor influence on aggregate financial leverage being statistically significant, implying that Australian firms and South African firms adopt different leverage strategies. Effectively, context does play a significant role on matters pertaining to capital structure strategies.

Abor and Biekpe [24] examined the determinants of capital structure of SMEs in the context of sub-Saharan Africa. The study argued that these issues have been quite under researched in this part of the world. The study specifically focused on SMEs in Ghana. Firstly, the results showed that short-term debt constituted a relatively high proportion of total debt of Ghanaian SMEs. Secondly, the positive relationships between debt ratios and both age and size suggested that age and size of the firms are very important in influencing SMEs' access to debt finance. In particular, it was found that newer and smaller firms were often discriminated against when applying for external debt finance. Thirdly, the significantly positive relationship between asset structure and long-term debt ratio denoted the fact that asset collateral played an important role in SMEs' access to long-term debt finance.

Meanwhile, Harvey, Lins [25] found that firms in emerging markets had potentially extreme managerial agency problems. The study examined financial statement data and detailed global debt issuance data to test whether debt capital is able to reduce the impact of agency problems. Evidence was that debt creates shareholder value for firms that face potentially high managerial agency costs. Furthermore, cross-sectional tests using financial statement data indicated that debt mitigates the reduction in firm value that accompanies a separation between a management group's control rights and its proportional cash flow ownership [25]. The incremental benefit of debt was found to be concentrated in firms most likely to have overinvestment problems because they have either high levels of assets in place or limited growth opportunities. As thus, subsequent internationally syndicated term loans are particularly effective at creating value for these firms.

In summary, these studies highlight that national context and industry factor play a role with regard to capital structure strategies. Further, size and age of the firm and the asset collateral play a significant role in terms of the type of debt financing to use. Notably, newer and smaller firms face more problems with external debt financing and firms with higher asset collateral use more long-term debt financing. With regard to reduction of agency problems, use of debt has been found to provide more value for the firms most likely to have over-investment problems or limited growth opportunities.

Research on Capital Structure Strategies in Transitional Markets

From the transitional markets perspective, Chen [26] explored the determinants of capital structure of Chinese-listed companies using firm-level panel data and the findings reflected the transitional nature of the Chinese corporate environment. Specifically, certain firm-specific factors that are relevant for explaining capital structure in developed economies are also relevant in China such as business operations following a profit-oriented nature despite China being a central economy as opposed to a market economy.

On the other hand, neither the trade-off model nor the pecking order hypothesis derived from the Western settings provides convincing explanations for the capital choices of the Chinese firms. The astonishing difference was that Chinese firms prefer short-term finance and use lesser long-term debt when compared to firms in developed nations. Interestingly, the capital choice decision of Chinese firms seems to follow a new Pecking order-namely; retained profit, equity, and long-term debt. The reason was that fundamental institutional assumptions underpinning the Western models are not valid in China. Precisely, significant institutional differences and financial constraints in the banking sector in China proved to be the factors influencing firms' leverage decision and they are at least as important as the firm-specific factors [26].

Meanwhile, Huang and Song [27] indicated that as in other countries, leverage in Chinese firms increases with firm size and fixed assets, and decreases with profitability, non-debt tax shields, growth opportunity, managerial shareholdings and correlates with industries. Furthermore, their findings confirmed Chen's finding that unlike in other countries, Chinese firms tend to have much lower long-term debt.

On a similar note, Ang and Jung [28] obtained responses from a sample of large South Korean firms and the results, using both marginal and sensitivity analysis, failed to support the pecking order hypothesis. For example, the results showed that when debt is high, firms are willing to issue shares as the preferred source. Therefore, Ang and Jung [28] found that the South Korean firms in the sample were similar to firms elsewhere, as predicted by trade -off and agency theory because they are sensitive to default probability and taxes, and to a large extent, they are willing to take advantage of information asymmetry.

In sum, these studies, though not extensive, highlight that transitional markets behave differently in terms of capital structure theories and strategies. For example, both trade-off theory and the pecking order theory have been violated in China, as it was found that Chinese firms seem to follow a new Pecking order of retained earnings, equity then debt, and that they tend to have much lower long-term debt. Nonetheless, South Korean firms failed to follow pecking order but were similar to other firms elsewhere in terms of prediction by trade-off and agency theory as they were sensitive to both taxes and bankruptcy and managerial inefficiencies.

Research on Capital Structure Strategies in Developed Markets

Studies in developed nations tend to show some explanatory power of the capital structure theories [20, 29, and 30]. According to Krasker [29], investors interpret stock issues unfavourably, and indeed, interpret larger issues more unfavourably than smaller ones. According to these researchers, this phenomenon provides a rationale for the portfolio approach adopted by many corporations. Specifically, this occurs where the cash generated by some divisions finances the investments of other divisions, and thereby reducing the need for external financing.

De Miguel and Pindado [31] found that transaction costs borne by US firms tend to be inferior to those borne by Spanish firms. The evidence confirmed the impact of some institutional characteristics on capital structure. The results were found consistent with tax and financial distress theories and with the interdependence between investment and financing decisions. Furthermore, they provided additional evidence on the pecking order and free cash flow theories.

Similarly, Frank and Goyal [21] tested the pecking order theory of corporate leverage on a broad cross-section of publicly traded American firms from 1971 to 1998. The study found that contrary to the pecking order theory, net equity issues track the financing deficit more closely than do net debt issues, thus equity was found to be more important than debt in this regard. However, large firms exhibited some aspects of pecking order behaviour, but the evidence was not strong when including conventional leverage factors, nor when analysing the evidence from the 1990s. The study found that over time, the support for the pecking order hypothesis actually declined. More small firms were publicly traded during the 1980s and 1990s than during the 1970s, and since small firms do not follow the pecking order, the overall average moved further from the pecking order hypothesis [21]. However, the time period effect is not entirely due to more small firms in the 1990s because even when attention was constrained to the largest quartile of firms, support for the pecking order theory weakened over time, equity still became more important. Furthermore, financing deficit was less important in explaining net debt issues over time for firms of all sizes.

Baskin [32] sampled a total of 378 US firms from the 1960 Fortune 500, though biased towards large firms. The results of the study indicated that capital structure in practice appears to be somewhat passively determined in response to the need to fund investment with an imperfectly elastic supply of equity from retained earnings. The study findings indicated that firms borrow because they need funds and once asymmetric information places limitations on equity finance, debt tends to become the primary incremental source of funding. The study concluded that established firms normally avoid new equity issues, and borrowing tends to be determined as the residual between desired investment and a relatively inelastic supply of retained earnings. As a result, the pecking order hypothesis was empirically motivated. However, the lack of compelling rational theoretical justification apparently limited its acceptance among the academic mainstream [32].

Hackbarth, Hennessy [33] demonstrated that the trade-off theory is sufficient to explain many stylized facts regarding corporate debt structure. Interestingly, the optimal debt structure for weak firms entails financing exclusively with bank debt. On the other hand, strong firms optimally use a mix of bank and market debt. The trade-off theory also generates predictions consistent with international evidence. For example, in countries in which the bankruptcy regime entails soft (tough) enforcement of contractual priority, bank debt capacity is lower (higher), implying greater (lower) reliance on market debt [33].

With regard to the agency theory, Jensen [22] indicated that the theory predicts that takeovers financed with cash and debt will generate larger benefits than those accomplished through exchange of stock. Stock acquisitions tend to be different from debt or cash acquisitions and more likely to be associated with growth opportunities and a shortage of free cash flow. Therefore, the agency cost of free cash flow is consistent with a wide range of data for which there has been no consistent explanation. Opler and Titman [34] paper investigated the determinants of leveraged buyout (LBO) activity by comparing firms that have implemented LBOs to those that have not. As consistent with the free cash flow theory, it was found that firms that initiate LBOs can be characterized as having a combination of unfavourable investment opportunities (low Tobin's q) and relatively high cash flow. Specifically, LBO firms tended to be more diversified than firms which do not undertake LBOs. In addition, firms with high expected costs of financial distress (being those with high research and development expenditures) were found less likely to do LBOs. Meanwhile, Archbold and Lazaridis [35] sent a questionnaire to the Finance Directors of a sample of 219 UK firms, drawn largely from the FTSE 250 and 300 firms listed on the Athens Stock Exchange. The results highlighted that overall both the trade-off model and the pecking order hypothesis are used by firms to guide their decisions over capital structure issues.

Meanwhile, empirical evidence has also suggested that multinational firms use less debt when compared to domestic firms [36-41] as cited in Singh, Davidson [2]. For example, multinational firms face country-specific risks and exchange rate risk which are not faced by domestic firms.

In sum, studies in developed nations show evidence of explanatory power of the three capital structure theories, namely trade-off theory, pecking order theory and free cash flow theory. However, firms that access the capital markets do not seem to follow the pecking order when choosing the type of security to offer [33].

Overall, studies on capital structure are prolific and extensive. As already discussed, they cover a wide range of important areas with a view to unravel factors that influence capital structure and the impact of capital structure on firm performance. While this literature has been insightful in projecting trend analysis on capital structure strategies across the globe, there is limited understanding of the basis for the decision-making rational at a management level. In this respect, the basic question of ‘how well defined are capital structure strategies adopted by firms’ grossly remains unanswered.

METHODOLOGY

A survey method using questions adopted from original questionnaire by Graham and Harvey [1] and further adopted in subsequent studies such as Archbold and Lazaridis [35] was used to determine the strategies used by Botswana firms. The study methodology is premised on the presupposition that issues of capital structure become weighty and more pronounced with the increase in the size of the firm, with the largest firms generally being those listed on the stock exchange. It is in this light that firms listed on the Botswana Stock Exchange (BSE) were sampled for the study, and in particular companies that had head offices in the capital city of Botswana, Gaborone. By default, foreign companies listed on the BSE were excluded in the sample. Owing to preliminary or exploratory nature of study, and with the view to cover the diversity of Botswana’s economy, a small sample of six firms was chosen on the basis of convenience sampling approach. In keeping with the above, the study approach was to conduct in-depth interviews using qualitative tools.

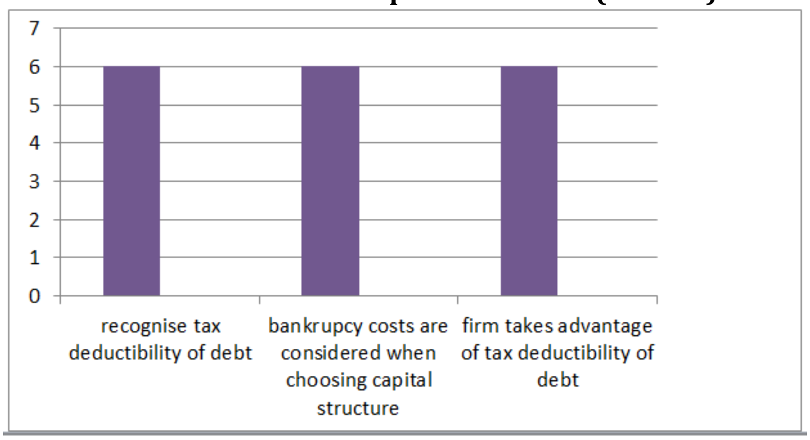
Data was collected using a survey questionnaire that solicited the responses from senior management personnel on strategies adopted by their respective firms in formulating and executing corporate capital structure strategies. In particular, the Chief Financial Officer (CFO) in the respective firms was the targeted respondent. The questions in the questionnaire were purposefully designed to relate the insights of the decision-makers to the three established theories of capital structure; the trade-off theory, the pecking order theory and the agency costs theory. The questionnaire adopted some of the questions from the original 100 questions from Graham and Harvey [1]. The original questionnaire asked questions relating to investment appraisal, cost of capital and dividend policy. However, for the purpose of this study, only questions focused on the debt to equity choices applicable to Botswana firms were selected, in addition to other facets that were found applicable to the study context. Also noteworthy is that this study was conducted as part of a larger study. In part, the aim was to test for the validity, adequacy and clarity of the preliminary questionnaire draft. Also, the preliminary questionnaire required testing on matters relating to the subject matter being investigated, conceptualisation and operationalisation of key variables. This further justified the small sample size.

RESULTS

In line with the trade-off theory, the study sort to determine firms' preferences for the different types of sources of financing. In particular, respondents were required to state their preference among the three major sources of retained earnings, external equity and debt financing. The results indicated a 16.7% preference for using retained earnings, 83.3% preference for using external equity and none (0%) preferred using debt financing. Considering that the trade-off theory advocates for the use of debt in the capital structure on the premise of the tax deductibility benefits, which effectively make it cheaper than external equity, the study results disprove this notion.

A trade-off for the benefits accruing to debt increases bankruptcy costs. The study sought to assess the extent to which respondents appreciated these properties of debt. Respondents were asked whether or not the factors of bankruptcy costs associated with debt, tax deductibility of debt and taking advantage of the tax deductibility of debt were imperative in the design of the capital structure strategy of their respective firms. The results, as presented in Table 1, found the trade-off properties of bankruptcy costs and the tax deductibility associated with debt to be imperative considerations by all firms in the design of capital structure strategies.

Table: 1 Trade-off Properties of Debt (Results)



The study findings are suggestive that management is conversant with the connotations and implications of the trade-off theory of capital structure. However, the extent to which these firms deliberately took advantage of the tax deductibility of debt in the design of their capital structure strategies is not apparent. Perhaps the lack of enthusiasm in taking advantage of the tax benefits relating to the use of debt is reminiscent of the difficult economic conditions that have been prevalent in the recent past. The advent of the global financial crisis has increased the risk associated with debt and increased the hurdles associated with its acquisition from financial institutions. In this regard, management would adopt a rather conservative and risk-averse approach in structuring their capital structures. The preference of external equity over retained earnings, however, remains inexplicable using the trade-off theory. This dilemma poses as a subject for further research.

The Pecking-Order Hypothesis

The pecking order theory is concerned with ranking sources of capital in order of preference and it ascertains that internal finance (or retained earnings) would be ranked highest, followed by debt and finally external equity becoming the least preferred. In sum, a firm would borrow, rather than issue equity, when retained earnings have been exhausted. The study results, as has already been indicated, showed an 83.3% preference for using external equity, 16.7% preference for using retained earnings, and 0% preference for using debt. To further analyse this phenomenon, respondents were asked to rank in the order of preference a wider variety of sources of finance. Respondents were provided with five types of capital sources (bank loan; bond; retained earnings; preference shares; equity shares) and asked to rank them 1-5, with 1 being 'most preferred' and 5 being 'least preferred'. The results indicated that equity financing was the most preferred source of funding. Retained earnings were found to be the second most preferred form of finance. Both forms of debt (loans and bonds) were tied on third place and the hybrid instrument of preference stock ranked as the least preferred source of finance. To the extent that retained earnings were not preferred over external equity, and that equity was preferred over debt, the results contradicted the pecking order hypothesis. While the study did not explore the reasons for preferring external equity over retained earnings and debt, it is not inconceivable that the prevailing debt covenants insisted by lenders may have introduced elements too vile to render debt an attractive option. Reasons for preferring external equity over retained equity are a puzzle and a scope for further research.

The Agency Costs Theory

The agency costs theory advocates for leverage. It purports that debt commits a firm's current and future resources, and thereby reducing the amount of idle resources, and cash in particular, that would otherwise be prone to the self-indulging behavior of management. In this regard, the firm's capital structure can aid the alignment of the interests of management to that of shareholders. Thus, debt can create an incentive for managers to work harder, consume fewer perquisites and make more optimal investment decisions, and thus maximize shareholders' wealth.

In the study, the respondents were asked if the capital structure formulation strategy of a firm in any way addressed issues related to the agency problem. The results indicated 67.7% of the responses affirmed that capital structure formation does direct itself in addressing the agency related costs, while 33.3% of the respondents did not find their strategies aligned to addressing the agency costs. For the purpose of validation of these results, respondents were asked which capital source would be used, between equity and debt, to mitigate agency costs. The results indicated that 80% of respondents would use debt over equity in addressing and mitigating a firm's agency costs. These results validated the point that management was generally knowledgeable of agency costs associated with capital structure strategies and how to mitigate the same.

While results affirmed managements' knowledge of agency costs and mitigation strategies, the capital structure strategies adopted by these firms are not reflective of the actuation of this knowledge. This conclusion is reached in light of the low inclination by respondents to use debt. These findings are suggested of some unidentified factors at play that prevent management from behaving in a manner economically rational enough as to reduce a firm's agency costs. The form and nature of these factors are a matter for further research.

CONCLUSION AND RECOMMENDATIONS

The paper set out to investigate the different capital structure strategies adopted by firms. The core of the study was to explore the extent to which capital structure strategies of firms were well defined within the scope of established theoretical frameworks. The research questions were developed from the capital structure theories so as to be able to solicit and determine the types of capital structure strategies adopted by different firms and infer the rationale thereof. The results indicated an overall lack of theoretical considerations in the adoption and application of capital structure strategies by management across the sampled listed firms. While most firms preferred using external equity as a financing option, followed by retained earnings, debt was found to be the least preferred financing option. Considering that the trade-off theory advocates for the use of debt in the capital structure on the premise of the tax deductibility benefits, which effectively makes it cheaper than external equity, the study findings did not conform to the trade-off theory. This is contrary to studies in other African countries, for example, short-term debt constituted a relatively high proportion of total debt of Ghanaian SMEs [7]. Since this study constituted large listed firms, which theoretically, would easily access debt financing, this lack of preference for debt further cements this anomaly.

On the other hand, the pecking order hypothesis dictates that firms would borrow, rather than issue equity, when retained earnings have been exhausted. Again, the results were inconsistent with the theoretical underpinnings of the pecking order hypothesis. A possible explanation for the anomaly could be that such large firms do not appear to tap the capital markets because of a shortfall in internal funds [42]. However, this still remains a puzzle and would need further scrutiny.

In terms of the agency theory, the results affirmed that capital structure formation (in theory) does direct itself in addressing the agency related costs, while their strategies were not aligned to addressing the agency costs. The respondents affirmed that debt was a tool in addressing and mitigating a firm's agency costs. While this outcome validates the point that management are generally knowledgeable of agency costs associated with capital structure strategies, the capital structure strategies adopted by these firms are not reflective of the actuation of this knowledge in their firms' capital structures.

Overall, management was generally knowledgeable of the benefits associated with debt financing, and in particular the tax-deductibility of the cost of debt and reduction of agency costs.

In conclusion, firms in Botswana are not consistent in adopting capital structure strategies that are consistent with established theories of capital structure when making their capital structure decisions. In light of these findings, and the preliminary nature of this study, a more extensive and non-exploratory study that will cover a whole spectrum of firms in Botswana in order to fully assess this phenomenon is recommended. Further, the puzzle that firms in

Botswana preferred external equity than retained earnings and debt will need special attention. In light of the low inclination by respondents to use debt, this is suggestive of some unidentified factors at play that prevent management from behaving in a manner economically rational enough as to reduce a firm's agency costs. Since the form and nature of these factors was outside the scope of this study, more scrutiny of this enigma in further studies is recommended.

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Analytical Inquiry of CFO Responsibilities: Aggregate Analysis of Perceptual Differences among Sda Conference Leaders in the USA, Canada and Bermuda

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Abstract

The basis of this investigation was incited by the notion that the perceptions of Seventh-day Adventist (SDA) Conference leadership significantly impacts how the responsibilities of Chief Financial Officers (CFOs) are perceived in terms of their understanding and working knowledge of the importance and performance of CFO duties. Data was collected from a purposeful sample of N=399 at fifty-seven SDA Local Conferences in the United States of America (USA), Canada and Bermuda. A Mixed-Methods sequential exploratory research design utilizing Descriptive Statistics and Student-Newman-Keuls Post-Hoc Tests reflected significant differences among the aggregate results of conference leaders consisting of presidents {CEOs}, treasurers {CFO}, and board members {BM}, concerning CFO responsibilities. Discussion and Conclusions include potential conflicting leadership expectations of the CFO's responsibilities, and a negative influence on the organizational culture and climate. Implications are applicable to organizations where leadership expectations of the CFO's responsibilities have changed or may not be clearly defined or understood.

KEYWORDS: Board Members {BM}, CEO (Chief Executive Officer/President {P}), CFO (Chief Financial Officer/Treasurer {T}), expectations, General Conference (GC), leadership, North American Division (NAD), perceptions, responsibilities, Seventh-day Adventists (SDA)

INTRODUCTION

The CFO represents the highest level of fiscal leadership and financial management service in the business sector (Witzel, 2010). The responsibilities of the chief financial officer has greatly increased over the years due to significant changes in global economies, governments, and globalization in the business and corporate society (Corson and Miyagawa, 2012; Zalud, 2012; MacManus, 2011). While global corporations, governments and organizations continue to experience one financial crisis after another which affects the CFO's position, the ultimate impact of these internal and external factors is the increasing responsibility resting on CFO's to safely guide their company's through the financial turbulence evidenced around the world (Corson and Miyagawa, 2012; Couto and Neilson, 2004; Cunningham, 2005; Ehrenhalt and Ryan, 2007; Heffes, 2009; Linden, 2012; O'Callaghan and Caulfield, 2006; Spanyl, 2011; Strategic Direction, 2004; Swanson, 2007; Tenkate, 2006). Financial reporting and managing information in a creditable manner was also cited as a very critical and essential responsibility of the CFO (LeBlanc, 2012; Vallario, 2011).

CFO's responsibilities necessitates a wide spectrum of relationships within the context of internal and external stakeholders comprising the financial community that are impacted by the organization's financial resources (de Jongh and Wielinga, 2011; Drucker, 1974; PricewaterhouseCoopers, 1999). A crucial responsibility of the CFO pertains to the CFO's relationship with the chief executive officer (CEO) and executive board as members of the organization's leadership team (Menkes, 2011; Carver, 1997; Gray, 1998). Acting as business partners, CFOs and CEOs serve together as executive officers providing each other leadership and support to ensure the organization fulfills its mission and achieves its strategic goals and corporate objectives (MacManus, 2011; Cardillo, 1998; Hartman, 2000). While expectations and perceptions of leadership may differ in some cases, it is vital to the organization's climate for CEOs and CFOs to communicate and work together, avoiding adverse relationships, to maximize the business operationalization of shareholder's value and stakeholder's interest (Shepherd, 2010; Krell, 2003; Millman, 2001).

The emergence of the Seventh-day Adventist Church as a global financial organization, and its rapid growth (Adventist World – NAD 2013, p. 5) as a global financial entity operating in multiple countries and industries has necessitated the emergence and development of skilled financial leadership that add substantial value to the organization (Adventist World – NAD 2013; Corson and Miyagawa, 2012; Menkes, 2011; Witzel, 2010; Voogt, 2010; Shepherd, 2010). CFOs in SDA local conferences function in a similar capacity to CFOs in businesses, corporation and other not-for-profit organizations. The SDA Accounting Manual (2011) refer to the CFO as the individual who has been given primary responsibility for the financial affairs of an entity" (p.4).

As with the business and corporate sectors, SDA local conferences are also directly impacted by the changes in our global societies, and CFOs are expected to navigate their organization financially during these changing times (Hollein, 2013; Vallario, 2011; Quinn, 2011). Barsky and Catanach (2013) stated that there has been a shift in CFO responsibilities, skill set, and an apparent increase in CFO Job responsibilities has occurred. As reflected in the changing organizational structure of the SDA church to accommodate its global mission in a changing world, so the responsibilities, understanding and working knowledge of SDA CFOs has appeared to change. However, it is not clear whether the expectations (Buckingham and Coffman, 1999), perceptions and work pertaining to the responsibilities of CFOs in SDA local conferences are clearly understood by conference leadership; specifically presidents, treasurers and board members.

METHODOLOGY

A mixed methods research design (Creswell, 2014) was used in this study. Creswell (2003) "defines mixed methods research by incorporating the definition that focuses on collecting and analyzing both quantitative and qualitative data in a single study" (p. 210). A sequential exploratory design involving qualitative (Eriksson and Kovalainen, 2008; Nardi, 2003) and quantitative (Elsbach and Bechky, 2009) methods was utilized in the collection and analysis of the data.

In the qualititave phase, interviews were conducted in four conferences among the presidents (CEOs) and treasurers (CFOs). In the quantitative phase Descriptive Statistics were used to analyze the survey data. Analysis of Variance (ANOVA) and Chi-Square statistical data analysis were used to process and interpret the survey questionnaires. The Likert Scale (Tharenou, Donohue and Cooper, 2007) was used as a survey response from the participants to measure the degree of agreement from strongly disagree (1) to strongly agree (5). Pertaining to this paper, Student-Newman-Keuls Post-Hoc Test were used to analyze and denote pairs and reflect significant differences among the groups.

Random selectivity from a sample to a population to generalize was one of the critical factor (Tharenou, Donohue and Cooper, 2007; Nardi, 2003; Drisko, 1997; Eisner, 1998; Patten, 2000) in this study. A survey was developed and distributed to a targeted group of 57 presidents, 57 treasurers and 285 board members in 57 Seventh-day Adventist local conferences comprising the countries of the United States of America (USA), Bermuda and Canada. The random selection of the executive board members from SDA local conferences in the USA, Canada and Bermuda enhanced generalization of the results of this research to a more global population.

RESULTS

Research Question

(1b) is there congruence between the perceptions of the presidents, treasurers, and executive board members as they relate to how the roles, responsibilities, and relationships of the treasurers are communicated?

Qualitative Analysis

Overall, the interview participant's perceptions of the responsibilities of the CFO from the past, present and future differed between the presidents (CEOs) and treasurers (CFOs) as individual groups. The closest similarity in the past was between two presidents and a treasurer who perceived the treasurers' (CFOs') responsibilities as being a "yes-man" and "servant" to the president (CEO), doing what the president (CEO) says. These past perceptions changed in the present when two presidents (CEOs) and three treasurers (CFOs) indicated that the management of the finances" was the critical responsibility of the treasurer (CFO). The perceptions of the future responsibilities for the "management of the finances" held the same for one president (CEO) and one treasurer (CFO), however, the responsibilities as a whole changed for the groups.

Two of the participants, a president (CEO) and treasurer (CFO) expressed that "providing financial leadership" would be needed, while the remaining participants all expressed differing viewpoints on what the future responsibilities of the treasurer would be. The perceived responsibilities by presidents (CEOs) and treasurers (CFOs) as individuals groups changed from the past, present and future.

Quantitative Analysis

A segment of the research question is expressed in the following manner pertaining to this topic: Is there congruence between the perceptions of the presidents (CEOs), treasurers (CFOs), and board members as they relate to the roles, responsibilities, and relationships of the treasurer are understood? The level of congruence is expressed in the mean (M) between the three groups.

The analysis and results of this research indicated that significant perspective differences exist among the aggregate of local conference leadership in the USA, Canada and Bermuda pertaining to presidents (CEOs), treasurers (CFOs) and board members concerning their level of understanding and working knowledge of the nature and working responsibilities performed by treasurers (CFOs) in their local conferences.

The three groups tended not to agree on whether the responsibilities (presidents, M=3.66; treasurers, M=3.11; board members, M=3.50) are clearly defined in the conference policies and job descriptions. Pertaining to the responsibilities of the treasurer (CFO), the Student-Newman-Keuls Post-Hoc Test (table 1) indicated that the treasurers (CFOs) responded to this expectation significantly lower than the board members and the presidents (CEOs), but there is no significant difference in the responses between the board members and the presidents (CEOs).

Table 1: Student-Newman-Keuls Test for Clearly Defined Responsibilities in Conference

Position	*N*	*M*	Treasurer	Board	President
Treasurer	38	3.11			
Board	144	3.50	*		
President	35	3.66	*		

* Denotes pairs of groups significant difference at the .05 level

Secondly, the three groups tended not to agree on whether they understand and have a working knowledge of the treasurer's (CFO's) responsibilities (presidents, M=4.38; treasurers, M=4.05; board members, M=3.72). The Student-Newman-Keuls Post-Hoc-Test (Table 2) indicates that board members responded to this expectation significantly lower than the treasurers (CFOs) and presidents (CEOs); and a significant difference also existed between the treasurer (CFO) and president (CEO).

Table 2: Student-Newman-Keuls Test for Understanding and Working Knowledge of Responsibilities

Position	*N*	*M*	Board	Treasurer	President
Board	145	3.72			
Treasurer	39	4.05	*		
President	34	4.38	*	*	

* Denotes pairs of groups significant difference at the .05 level

In spite of the significant differences between the presidents (CEOs), treasurers (CFOs), and board members pertaining to their level of understanding, and having a working knowledge of the treasurer's responsibilities in their local conference; all of the groups believed that the expected responsibilities of treasurers (CFOs) are clearly defined in the North American Division

(NAD) and General Conference (GC) policy books. All three groups also tended to agree that it is the president's (CEO's) responsibility to communicate expectations, but they tended to disagree on whether expectations should be verbally communicated or in a written document.

IMPLICATIONS AND CONCLUSIONS

Significant implications emerged in light of the findings of this study. Pertaining to the quantitative survey questionnaires that were distributed to the NAD local conference presidents (CEOs), treasurers (CFOs) and board members, the presidents' (CEOs') response appears to reflect their having a higher level of understanding and working knowledge of the treasurer's responsibilities than the treasurers (CFOs) who "actually occupy the position and do the work".

The treasurers clearly did not perceive their responsibilities (M=3.11) as clearly as presidents M=3.66) as indicated by lower means. This lack of agreement could create misunderstandings between the two leaders, (presidents and treasurers), as well as cultivate conflict in the leadership team. If the expectation of the treasurer (CFO) are not clearly defined and understood by presidents (CEOs), treasurers (CFOs), and board members; then there is a potential for confusion of expectations, loss productivity, and inter-relational conflicts among the conference leadership.

Because the board members (M=3.72) are less confident than the presidents (M=4.38) and treasurers (M=4.05) of their understanding of the treasurers' responsibilities it may be helpful to have training sessions to orientate and provide a clearer understanding of the treasurer's work.

These strategies may enhance organizational effectiveness while fostering greater accountability and corporate governance.

Failure to clarify expectations can potentially result in problems that may hinder the achievement of organizational goals and objectives; and create conflicting partnerships and relationships between presidents (CEOs), treasurers (CFOs), and board members. Similar outcomes of expectations may exist in other business entities and organizations, however, regardless of industry or sector, when expectations of the CFOs' responsibilities are not clearly defined, communicated or understood among the leadership team; a greater climate may exist for potential conflict between leaders and develop organizational inefficiency.

Therefore, the responsibilities of the treasurer (CFO) should be clearly defined, documented, and communicated in the policies of the governing local conference organizations. Policies regarding the treasurer's work should be updated to reflect the current understanding of presidents (CEOs), treasurers (CFOs), and board members and other key leaders in the organization. Change is to be expected and implemented to ensure that best practices among treasurers (CFOs) are realized in SDA local conferences. Treasurers (CFOs) should also consider and explore the possibilities of discussing their responsibilities with presidents (CEOs) and board members to clarify expectations, definitions and understanding before assuming the position in the conference.

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Beyond the Reengineering of Polytechnics into Technical Universities in Ghana: A Model of Marketing the Offering!

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Abstract

The purpose of the current study is to develop a model for the marketing of technical university education in Ghana. The study based its analysis on 10Ps of a marketing mix which includes: programme, price, place, promotion, processes, people, practicality, prospect, proof of performance and post-entrepreneurship. These elements of the marketing mix were supported by the resource based view, human capital theory and the marketing mix concept. The review of literature and analysis showed that the 10Ps are critical and practical elements for the marketing of technical university as they help identify the unique areas of the offering that give technical education sustainable competitive advantage. The primary recommendations of the study were that technical university education must not be indiscriminately established if it should have a powerful influence on national development. Finally, the process should be gradual and be based on a polytechnic institution's readiness.

Key words: Marketing mix, national development, traditional university, technical university

INTRODUCTION

On Tuesday January 5, 2015, Dr George Afeti, Chairman of the Technical Committee on the Conversion of Polytechnics in Ghana to Technical Universities presented the report at a forum in Accra on the theme: "Repositioning Technical Education as a Driver of Economic Transformation and National Development". The report stated that the nation's Polytechnics will have to re-engineer themselves to become technical universities. In this case, polytechnics are to be granted technical university status to offer Bachelor of Technology degree programmes in science and technology-based disciplines. According to the report, this would entail the polytechnics emphasizing staff development programmes to raise staff qualifications to university levels and developing capacity for curriculum engineering, management of internships, quality assurance, applied research and technology inter-change with industry. The report recommended that it was important for the polytechnics to remain focused on career-focused programmes and not fall into the academic drift "trap" of offering traditional university programmes. The report recommended the effective commencement date for converting the Polytechnics to Technical Universities to be September, 2016 (i.e. beginning of 2016/2017 academic year) to allow for sufficient time to undertake due diligence on the current status of the polytechnics.

This step by the nation is yet another milestone in the life of polytechnic education in Ghana. Polytechnic education had earlier been up-graded from pre-tertiary to tertiary education to run programmes in Higher National Diploma (HND) Certificates, a decision which was greeted with cheers by stakeholders of tertiary education in Ghana. The Polytechnic Law 1992 (PNDCL 321, 1992) made this possible as the HND program started in 1992/1993 academic year. The reform was not for the polytechnics to directly compete, but to perform a complementary role to the universities to increase access to tertiary education by training middle level manpower for the country's manpower needs. It is interesting to note that the first few years of the Polytechnic's upgrading saw encouraging and appreciative participation, with students' enrollment increasing from year to year.

Nevertheless, in the last few years, the enthusiasm of which people enrolled into polytechnic education seems to be going down with the passage of time. This is evidenced by decrease in enrollment, which is so alarming that managers of polytechnic education and government must be weary. The emergence of private universities, particularly in the middle to late 1990s, the expansion and increase of the number of public universities, the increased attention to distance learning, and establishment of same admission requirements for entry into both polytechnic and university might primarily explain why polytechnic institutions suffer a setback of students' enrollment. It is in this vain that further transformation of Polytechnic education into Technical University to run Bachelor of Technology degree programmes in science and technology-based disciplines is a welcome idea.

This university status of the polytechnics put them in line with the traditional universities, thus exposing them to direct competition from the traditional universities. Research has suggested that tertiary education institutions can maintain competitiveness if they realign themselves to meet the needs and expectations of society (Tierney, 2008). This means a competitive tertiary institution is able to consistently predict the future success, innovation and contributions of its graduates to society in order to remain competitive (Zhao, 2009). In this connection, polytechnics in Ghana can compete for prospective students if they re-align their offerings to the technical and vocational needs of targeted prospective students. This re-alignment could be possible if the polytechnics reposition their offering to be distinct from the offerings of the traditional universities. This calls for application of marketing in the planning and running of technical university in Ghana.

The significance of marketing in the competitiveness of tertiary education has received attention in the extant literature (McGrath, 2002; Hammond; Harmon & Webster, 2011; Webster & Hammond, 2012; Zebal & Godwin, 2012), with particular reference to such marketing practices as segmentation, targeting and market positioning (Newman, 2002). In this connection, application of marketing approaches in the higher educational institution has received appreciable recognition as a means of growing, transforming and improving the success of the institutions (Hemsley-Brown & Oplatka, 2006). This does not mean that polytechnic education institutions can be treated as mere commercial organizations (Akonkwa, 2009), yet due to the reengineering, and the dynamic nature of the tertiary education environment, effective management of the marketing mix can play a crucial role in managing the transformation programme, as well as the pressure and changing needs that these bring.

Since marketing involves provision of customer needs and expectations in ways unique to the institution (Kotler and Fox, 1995), polytechnic institutions that effectively manage appropriate marketing mix and implement them in a greater degree might be in a position to differentiate their offerings against other competing tertiary institutions. The application of marketing to tertiary education is found to contribute significantly to the management of institutions to compete effectively for students at the institutional, national and international levels (Sizer, 2001). This suggests that if polytechnics apply marketing mix appropriately in the management of their institutions, as they reengineer to technical universities they would not only compete amongst themselves, but also be in the position to differentiate their offerings to attract applicants who might ordinarily opt for traditional university education; and they can even target foreign students. It is significant to note that the traditional universities have the image and goodwill from the public, therefore given them some degree of competitive advantage over the prospective technical universities. Thus, the only way to succeed in the university education environment is for the technical universities to strategically enter and take some reasonable amount of the market share, hence the urgent need for application of an appropriate marketing model.

Regarding the marketing model as it applies to university education, authors have suggested different possible mixes. For example, Ivy and Naude (2004) suggested “7Ps” consisting of ‘programme, prospectus, price, prominence, people, promotion and premiums’ as effective approach for marketing university education. Earlier, Kotler and Fox (1995) had developed a similar marketing mix for marketing tertiary education, which comprise of programme, price, place, promotion, people, process and physical evidence. These different marketing mix approaches are not only similar in their approach and orientation, but they are also focused on marketing university education in general (Ivy & Nuade, 2005). It is however significant to acknowledge that marketing approaches used for traditional university education may not necessarily work for the technical university education. This is based on the premise that unlike traditional university, technical education lays the foundation needed to acquire the technical knowledge and skills offered by a technical university and on-the-job training (Bozick & Dalton, 2013). Again, unlike traditional university education, technical university is supposed to provide specific human capital development instrument that can be effective in promoting socioeconomic progress (Okoli & Onwuachu, 2009). In this vain, it would not be too necessary to apply the same marketing model in the marketing of technical university as it for traditional university education. Thus the current study pays particular attention to the marketing of technical university in Ghana by expanding the frontiers of the Ps from 7Ps to 10Ps. The current study conceptualizes a model of marketing technical education to consist of: programme, price, place, promotion, people, process, prospect, pro-entrepreneurship, practicality and proof of performance. This expansion is to bring out certain critical elements of marketing that could be specific in marketing technical education but not necessarily for traditional university education.

Thus, the purpose of this article is to make progress in analysing some key elements of a technical university by synthesizing some of the principal contributions to this emerging field. The paper develops and extends some of the concepts and theories in technical education, human capital, resource based view and the marketing mix. The study also seeks to expand the marketing mix of tertiary education from the usual 7Ps to 10Ps as a model for marketing technical university in particular. The rest of the paper also contains recommendations and direction for future research.

LITERATURE REVIEW

Technical Education

Technical education is the training of engineers and technicians for work in industry, construction, transportation, communications, agriculture, and forestry (Temple, 2009). The term “technical education” is also understood to include the theoretical and practical scientific knowledge and skills that permit a person receiving such education to solve production, engineering and economic problems in his specialty. In addition to specialized technical education, there is also supplementary and general technical education. Supplementary technical education provides students at higher educational institutions with the technical knowledge and skills required for the study and use of machines, mechanisms, equipment, and automatic control devices used in many areas of science, education, and culture. It includes technical and engineering disciplines that are studied in university departments: engineering, science, applied arts and applied science; in agricultural higher educational institutions in the departments of agriculture and veterinary medicine; and in specialized business and administration programmes in the area of marketing and entrepreneurship. The importance of supplementary technical education has grown with the increasing use of technical equipment in various areas of science and culture; for example, the technology of experimental research, computer technology, and technical aids in education. General technical education is provided in general-education and lays the foundation needed to acquire the technical knowledge and skills offered by a technical university and on-the-job training (Bozick & Dalton, 2013).

In most countries, specialists with higher technical educations are trained in polytechnic and industrial institutes, specialized higher technical educational institutions, including factory-based higher technical educational institutions, in the technical departments of several universities, and in higher technical military educational institutions. Technical education is considered by development experts and donors to be a specific human capital development instrument that can be effective in promoting socioeconomic progress. Investments in technical education is seen as an approach to increasing economic competitiveness and reducing poverty, increasing productivity, employability and sustainable national development (Wallenborn, 2010). This suggests that technical universities, if well managed should have certain core competences that could give them sustainable competitive advantage over the traditional universities.

The roles of technical education, with its focus on science and technology in national development cannot be overemphasized. Any nation which fails to plan for effective technical education plans to fail in its national growth and development. Akerele (2007) aver that rapid and sustainable development of a country can only be achieved through scientific research, rational application of science and technology knowledge and skills. According to Okoli and Onwuachu (2009), technical education provides the tools for economic, social, and political development of a nation. The categorisation of national states into developed, developing, and less developed nations has even been largely linked to the ability of the developed countries to convert scientific ideas to usable technology while the developing and underdeveloped countries are yet to do so effectively. Many nations, including the developing ones have come to the recognition of the impact of technical education, particularly in science and technology development to the overall national development. Thus, Ghana cannot afford to move with the rest of the world by developing its technical education at the higher level of education.

The Role of Technical and Vocational Education in National Development

Discussions on technical education could be better put into context by looking at it from the human capital theory point of view, since the theory is considered to have significant influence on the analysis of the labour market (Alam, 2007). According to Alam (2007) investment in education and training must produce a return for the individual and the society as a whole. To the individual, this could be the benefit in terms of better career path, increased earning and a better quality of life. The return on investment for society on the other hand will be a skilled workforce that will enable global competitiveness and economic growth. Earlier work by Fagerlind and Shah (1989) on the concept of 'human capital' had suggested that education and training raises the productivity of workers, and increases their lifetime earning capacity.

According to Alam (2007), governments have being using technical education systems to help unemployed young people and older workers get jobs, reduce the burden on higher education, attract foreign investment, ensure rapid growth of earnings and employment, and reduce the inequality of earnings between the rich and the poor. This means in a country with high unemployment rate like Ghana, technical education is a must to address the unemployment 'canker'. However, Zymelman (1976) and Tailak (1998) argue that technical education provides a lower rate of return than traditional education. Yet, Bennell (1996) refutes this assertion, arguing that even if technical education students are less 'academically brilliant', the rate of return for it is still high. Similarly, Colin (1999) suggests that technical education does not only prepare skilled labor but also provides general education to the students. According to Colin (1999) technical education can play vital role for development planning, but he warns that if the policy makers do not make it up-to-date, and technical education institutions do not have enough qualified teaching faculty and sufficient facilities to offer quality technical education, it will not be useful. This suggests that the government has a key role to play to ensure that technical education works to generate the necessary return to the individuals and society by providing the necessary facilities. At the same time the institutions must develop their human capital to improve the quality of teaching faculty.

Theory of Human Capital

The concept of human capital recognises that not all labour is equal and that the quality of employees can be improved by investing in them. The education, experience and abilities of an employee have an economic value for employers and for the economy as a whole (Crook, Todd, Combs, Woehr & Ketchen, 2011). Human capital is the stock of knowledge, habits, social and personality attributes, including creativity, embodied in the ability to perform labor so as to produce economic value (Mahroum, 2007; Jaison & Richard, 2012). Alternatively, Human capital is a collection of resources - all the knowledge, talents, skills, abilities, experience, intelligence, training, judgment, and wisdom possessed individually and collectively by individuals in a population (Heiner, 2008; Simkovic, 2013). These resources are the total capacity of the people that represents a form of wealth which can be directed to accomplish the goals of the nation, or state, or a portion thereof.

Human capital is an aggregate economic view of the human being acting within economies, which is an attempt to capture the social, biological, cultural and psychological complexity as they interact in explicit and/or economic transactions. Many theories explicitly connect investment in human capital development to education, and the role of human capital in economic development, productivity growth, and innovation has frequently been cited as a justification for government subsidies for education and job skills training (Bowles & Gintis, 1975).

According to Erhurua (2007) human capital development presupposes investments, activities and processes that produce knowledge, skills, health or values that are embodied in people. It implies building an appropriate balance and critical mass of human resource base and providing an enabling environment for all individuals to be fully engaged and contribute to goals of an organization or a nation. Any effort to increase human knowledge, enhance skills, productivity and stimulate resourcefulness of individuals is referred to as human capital development. Thus, technical university qualifies to provide the needed human capital for national growth, and must be given the due attention; hence it is appropriate to consider human capital as a theory that supports a study of technical university education.

Resource Based Theory

The resource-based theory or resource-based view (RBV) has been one of the necessary theories in management and marketing studies, especially studies that concern themselves with management of organisation's internal resources for sustainable competitive advantage. The resource-based theory stipulates that for an organisation to achieve a state of sustainable competitive advantage, it must acquire and control valuable, rare, inimitable, and non-substitutable resources and capabilities; and also put in place responsive management system that can absorb and apply the resources (Barney & Clark, 2007; Helfat & Peteraf, 2003). This requires that individual polytechnic institutions need to be internally ready for the transformation to the technical university status. Reengineering should not be automatic but should be based on internal resources strengths of the institution.

Similarly, Vorhies and Morgan (2005) and Barney, Ketchen and Wright (2011) opined that the resource-based theory provides an important framework for explaining and predicting the basis of a firm's competitive advantage and performance. In this connection the theory proposes that a firm must possess valuable resources, which other firms find it too costly or difficult to imitate for it to have control over the resources and attain to sustainable competitive advantage (Barney & Hesterly 2012). This suggests that for technical universities to deliver superior performance, they must gain competitive advantage through design and implementation of technical programmes which are unique to only technical institutions and also have the requisite faculty (Hafer & Gresham, 2008). The resource-based view also emphasises the need to disseminate information about the organisation's (Rumelt, 1984; Mahoney, 1995). Thus, technical universities should make information generation and dissemination a regular feature to ensure superior education delivery that leads to sustainable competitive advantage (Langerak, Hultink, & Robben, 2004; Malik & Naeem, 2009).

The features of organisation's resources, which are: valuable, rare and imperfectly imitable are critical for competitive advantage. Nevertheless, an organisation must be "organised to exploit the full competitive potential of its resources and capabilities" in order to gain sustainable competitive advantage (Barney and Hesterly 2012). If the organisation fails to put in place an organised system to deal with poor organisational processes, policies, and procedures, this may undermine a resource's potential competitive advantage (Barney & Clark 2007). Thus, effective the 10Ps model proposed for this study is critical for technical universities to realise their full potential.

Furthermore, the usefulness of the resource-based theory in the study of organisation's competitiveness is emphasised by the varying studies in the area of information systems (Wade & Hulland, 2004), organisational networks (Lavie, 2006), areas of management studies (Armstrong & Shimizu, 2007; Lockett, Thompson & Morgenstern, 2009), and a number of marketing studies (Morgan, Slotegraaf & Vorhies, 2009). Therefore the resource based theory is appropriate in the study of marketing technical university education in Ghana because it supports the current model of the study.

The Marketing Mix

Marketing is about communicating the value of a product, service or brand to customers for the purpose of promoting or selling that product, service, or brand (Kotler & Keller (2009). An organisation in the market economy survives by providing goods and services that persons are willing and able to buy. Consequently, ascertaining customer demand is vital for a firm's future viability and even existence as a going concern. Many organisations today have a customer focus philosophy (Kotler & Keller (2009). This implies that the company focuses its activities and services on customer demands. A formal approach to this customer-focused marketing is known as the marketing mix.

The marketing mix refers to the set of actions, or tactics, that a company uses to promote its brand or product in the market. The marketing mix is a model suggesting that a marketing strategy consists of tools and techniques (elements) that can be identified for ease of understanding a product offering (Kotler & Keller, 2009). The marketing mix is a marketing strategy model, with a set of controllable elements available for an institution to shape the nature of its offer to customers. In connection with technical university, it is to put the educational service offering into a number of component parts and arrange them into manageable subject areas for making strategic decisions (Palmer, 2001). The traditional marketing mix involves the 4Ps of Price, Product, Promotion and Place. However, with the increasing demand for services, the marketing mix increasingly includes several other Ps depending on the services offering (Palmer, 2001). This explains the appropriateness of the 10Ps adapted for this study.

Kotler and Fox (1995) have developed a model of a marketing mix which is designed specifically for educational institutions that seem to address the limitation of using the 4Ps in studying the education offering (Palmer, 2001). According to Kotler and Fox (1995) marketing mix in educational context should consists of seven marketing tools (i.e. 7Ps). They identify these tools as: 'programme, price, place promotion, processes, physical facilities, and people. Other elements of the marketing mix has been suggested for the study of education offerings, such as Ivy and Naude (2004) "7Ps" and Ivy (2008) "7Ps", involving 'programme, prospectus, price, prominence, people, promotion, premiums'; and Gray's (1991) "5Ps"; Coleman (1994) "5Ps" and Ho and Hung's marketing mix (2008) which consists of 'living, learning, reputation, economy and strategy.

THE MODEL OF MARKETING TECHNICAL EDUCATION IN GHANA

In discussing and analyzing how to market the technical universities in Ghana the study adapted and expanded the analysis on the marketing mix model (7Ps) developed by Kotler and Fox (1995). This model consists of elements including programme, price, place, promotion, processes, people, practical facilities, prospect, proof of performance and pro-entrepreneurship. The reason for adapting the Kotler and Fox (1995) elements of the marketing mix in this study is because the tools capture most of the areas of concern for the analysis and set of actions, or tactics, that the institutions can use to promote and sell its technical university brand. The extension of Kotler and Fox's (1995) model is to ensure that key elements that are specifically significant to marketing technical education in particular are covered.

Programme

The first element in the marketing mix used to study technical education's offerings is 'programme' (Kotler and Fox (995). This is concerned with issue of what programme to offer and how to structure and design it within an institutional marketing strategy. The literature is full of studies relating to the educational programme to be offered (Cubillo & Cervino, 2006; Frumkin, Milankovic & Sadler, 2007).

According to this element of the marketing mix, an institution usually begins by identifying the programmes and services to be offered and make available to the market and customers, whether they are students, companies or grants providers. An institution also questions whether this programme matches customers' needs. This suggests that technical universities with technical programmes will find their markets and differentiating between them from the traditional universities on the basis of their programmes and their quality (Kotler & Fox, 1995). If the technical universities are able to offer technical education and training that is distinct from those of the traditional universities, it will help establish the institution's identity which can lead to sustainable competitive advantage (Barney and Hesterly 2012). This is because the positive identity as institution that train people duly for the job market shall position the institution in mind of its customers and determines how they will respond to their offerings (Gibbs & Knap, 2002). In this direction, it is critical that the technical universities appropriately come out with well designed, developed, tested, piloted, provided, installed and refined programmes (Hollensen, 2003). This will require that programme design should involve students and employers, bearing in mind their needs and requirements (Gibbs & Knap, 2002).

Marketing of technical university education will be more challenging than even marketing Higher National Diploma programmes. This is because technical university is going to offer degree programmes and shall therefore have direct competition from the traditional universities. Also, they are going to offer professional and technical services, which customers cannot inspect before purchasing (White, Martin, Stimson, & Hodge, 1991). Moreover, education is an experience service, which relevant characteristics can only be effectively assessed by consumption (Amaral & Magalhaes, 2007). This means it is only when a student attends and studies the technical programme that he or she gets an idea about what has been 'purchased' in terms of quality relative to the programme of the traditional education. In this connection, the technical university programme does not exist until the institution performs the service, usually in the presence of the customer, and it does not necessarily result in the ownership of any material thing (Kotler, Bloom, & Hayes, 2002). Thus it is suggested that the technical universities increase tangibility of their programmes by providing in advance, lecture materials, course outlines, handouts, course books and free access to the institutions website (Gibbs & Knap, 2002). They can also use graduates from foreign technical universities and their physical contribution to national development as an experiential factor to market the programmes

Price

The price element of the marketing mix is in this model relates to school fees offered, which is critical to every institution as it reflects on revenues (Kotler & Fox, 1995). This is because the technical universities shall rely on school fees as a basic and most immediate revenue source (Tang, Tang & Tang, 2004). Pricing is an important element that the managers of technical universities must pay particular attention if they want to be competitive in the tertiary education sector. This is because, pricing will play a major role on the marketing strategies as most students and their parents are concerned about the financial implications of attaining university education (Pugsley, 2004; Holdsworth & Nind, 2005; Beckie, 2009). Students and parents alike are usually cost conscious and usually pay fees with difficulty as they compare how much they are paying and how soon they can get jobs to compensate for the lose (Eckel, 2007) Parents and students are also aware that public universities get a lot of money from the government and that the actual cost of attending university varies from institution to institution. With such public awareness and sensitivity, technical universities would have to set price policies that allow student to offer courses at relatively lower cost.

As the traditional universities are already ahead, technical universities would have to charge reasonably low fees that should be gradually upgraded as the relative quality of their programmes continue to become manifest with time (Foskett & Hemsley-Brown, 2001). Where it becomes necessary to charge high fees for some programmes it needs to be justified and this, in turn, should be explained to the public. It must be stated here that pricing should be done with utmost care as there is substantial impact on the perception of quality when being matched to price (Foskett & Hemsley-Brown, 2001). Other strategies that the technical universities can use to attract students are rebate for early payment of fees, discount on fees and scholarship offers. The universities attract potential students to enroll by seeking scholarships from government, organisations and other agencies; provide financial assistance internally where possible and offering financial benefits. There are often more scholarships for technical programmes than other university programmes, which the technical university institutions can take advantage of... This will affect the students' choices as they may consider technical universities as institutions with the most generous offer (Kirp, 2003)

Place

According to Brassington (2006) the place element of the marketing mix refers to the system of delivery and channels of service distribution. This involves making education available and accessible in terms of time and geographical distribution of teaching and learning (Kotler & Fox, 1995). In a technological driven world, place is not restricted to the physical and geographical location of the institution, since there can be other virtual means of providing education. It is anticipated that there will be heightened competition between the technical universities and the traditional universities. This expectation requires that technical universities plan to offer alternative ways of delivery, such as evening and weekend schools, Open University campuses in relevant locations (El-Khawas, 1999), to cater for workers seeking job skilled programmes or women that care for their children or other members of family at home. Online service is not recommended as an immediate strategy since technical education delivery usually involves hands-on activities. However, for effective and timely delivery, institutions would have to include a website that allows students to download information all the time (Kotler, Bloom & Hayes, 2002). Place is not only restricted to university's way of delivery; it should also take into account the convenience of an institution's location and access to the students. This means in planning for the technical university education in Ghana, managers of the programme should consider campus built-environment and residential facilities (Ivy & Naude, 2004; Maringe, 2006)

In planning strategically, the institutions would have to consider the convenience and attractiveness for students in terms of place, having in mind that the students are the very essence of the existence of the university, and that their needs and requirements should be a concern. While the institutions might decide to operate a single location delivery, to have students physically study there (Kotler & Fox, 1995), they might also decide by way of availability and accessibility expands not only the delivery system but also the location to others, such as a multi-site strategy (Jobber, 2004). The schools can also target a certain customer segment by distance learning, part-time, evening or weekend courses.

Promotion

One element of the marketing mix that needs careful attention, planning and management because of its pervasiveness is promotion (Brassington, 2006). Promotion is defined as an institution's ability to communicate with its markets. Promotion of university education has received some degree of attention in the literature (Armstrong & Lumsden, 1999; Harris, 2009). Palmer (2001) breaks down promotion into four distinct elements: advertising, sales promotion, public relations and personal selling. There are various sets of tools within each of these elements, available for an institution to use in order to communicate with its customers, such as Web-advertising, search engine optimisations (Blumenstyk, 2006), direct mail, educational show exhibits, open days or conferences. This requires that the technical universities establish efficient internet system that is active 24 hours a day, seven days a week. The schools can also participate in trade fairs and workshops to exhibit their offering to potential buyers. Presentations at local and international seminars and conferences should also be a constant factor to sell the institution's offerings. Promotional activities are more effective when they are sustained and targeted. In other words, beyond the conferences and exhibitions, the institutions can target continuously students at their final year at senior high schools.

Managers of the technical universities should liaise and collaborate with authorities of senior high schools and parent-teachers associations to sell this new offering of technical education and its potential benefits to them. This is one of the less expensive ways of promoting the institute's programmes. Institutions need to build up channels of communication with potential customers, and use marketing intelligence to gather any information that an institution would find useful (Kotler, 1999).The difficulty in communicating educational programmes due to its intangibility, notwithstanding, institution could use tangible cues to help customers understand and judge a service. For example, tracer studies of successful graduate of technical education at the HND level could be gathered as evidence of the usefulness and benefits of the institution's programmes (Jobber, 2004).

Processes

Processes refer to the way an institution does business, and this relates to the whole administrative system to this element (Kotler, Bloom & Hayes, 2002). Processes are how things happen in an institution, such as the process of management, enrolment, teaching, learning, social and even sports activities. Processes may be of little concern to customers of manufactured products (Palmer, 2001); nonetheless, they are of critical concern to high contact services such as education. In view of this, technical universities would have to take into consideration how their services are to be offered. Some of these importance processes may include teaching methods and assessment system, which is of great concern to most prospective students (Ivy & Naude, 2004). On a strategic level, institutions are careful about the delivery of service, and what quality controls can be built in (Brassington, 2006), so that customers can be confident that there is consistency in the service offered. In this connection, technical universities would have to strengthen and efficiently manage their quality assurance systems. In order to avoid inconsistency in the processes to erode students' confidence, technical universities would have to establish common criteria that can guarantee consistency and maintain satisfaction. In line with this, the institutions could adapt quality management systems, such as the Total Quality Management (TQM) or other franchised systems such as the ISO9000 series (Sallis, 2002).

People

People' refers to all the teaching, workshop, laboratory and administrative staff through which the service is delivered, and students' relations built (Kotler & Fox, 1995). People also include the institution's current and former students. This is because information and views of former students have great influence on prospective students (Kotler & Fox, 1995; Hollensen, 2003; Brassington, 2006). This view is based on the argument that education like many other services, depends on the people who perform them, as they are the ones that are delivering the service. Lovelock and Wirtz (2004) supported the argument by suggesting that direct involvement in service production means that students evaluate the quality of employees' appearance and social skills, as well as their technical skills; and consequently this is reflected on the way the offer is judged.

People as an element of marketing mix require that technical university institutions start on developing its staff. This is because research has shown that the success of an institution is more dependent on the attitudes, commitment and skills of the whole workforce, than on any other factor (Wright, 1999). Qualified lecturers and administrators are essential for efficient delivery of technical education. Thus, management of the institutions identify and sponsor more teachers for higher studies and requisite training to give them the required skills to produce the technical service needs of the country. Necessary and deserving promotions would need to be made to put people at the ranks needed to champion the necessary services delivery that ensures the conveying of shared beliefs and goals, that the institution is customer oriented. Failure to work toward achieving this feat may have serious consequences on the idea of building a positive relationship with stakeholders of the institutions. On the other hand if the institutions are able to raise staff that can deliver to make stakeholders feel comfortable with and trusts a particular institution, then the traditional universities would find it quite challenging to disrupt this relationship (Brassington, 2006). Trained and sponsored staff should cultivate the habit of keeping track and following-up each individual student, not only on an academic level but on many individual levels (Dennis, 1998). Furthermore, alumni unions should be established and strengthened to maintain mutual relationship after the service is complete.

Practicality

Technical education cannot attain its competitiveness without practical tools necessary to give assurance of hands-on activities. The physical and tangible items an institution makes available to students ranging from brochures to the infrastructure such as well-equipped laboratory is a pre-requisite for marketing technical university education (Palmer, 2001). Practical facilities, as an element of the mix, plays a major role as it is the means by which an institution is likely to increase the practicality of its offering, especially with the fact that there is not usually much to be inspected before purchase (Gibbs & Knapp, 2002). In this respect, practical facilities in the form of laboratories and other practical training centres should be evident of the institution's preparedness to offer truly technical education to prospective students. The institutions should work together with laboratory technicians, caterers, architects and graphic designers in order to present attractive and effectively functioning facilities.

Also, as suggested by Kotler, Bloom and Hayes (2002) the most immediate clue for prospective students about a university's technical-oriented identity is evidence of availability and quality of its practical facilities, including science and computer laboratories, automobile and mechanical workshops, production shops and drawing rooms. This may be the first impression prospective students have of an institution upon visiting. Usually, the first thing they see is the built-environment and the facilities the university has. Similarly, Gibbs and Knapp (2002) aver that the condition of the practical training facilities have a significance contribution to the image of the institution. In this vain, institutions should not only ensure the provision of comfortable lecture rooms and students hostels, but also ensure well equipped laboratories and other hand-on training facilities. These would make the individual student comes to understand what and how the institution is able to offer practically in the context of the learning experience (Gibbs & Knapp, 2002). Existing of practical facilities at the right quantity and quality should make it possible for prospective students to purchase technical university education's offering now and in the future (Hollensen, 2003).

Prospect

Studies have identify needs that motivate students to select a university as teacher inspiration (Corwin & Tierney, 2007; Mullen, 2009); instrumental reasons (Townsend 2003; Saiti & Prokopiadou, 2008); enjoyment of the subject (Pasternak, 2005) and wanting to be with friends (Mullen, 2009). This will require that technical universities do not only promise to provide prospective students' needs, but also find ways to fulfill these needs in order to attract students to their institutions. It should be prudent that the institutions attempt to put in place measures that can motivate students to collect more information about their institutions, especially through direct visits and Open Days to give students the opportunity to process more information (Moony & Robben, 1997).

It is important at this stage for the institutions to pay attention to the staff members at the point of enrolment, which are the reception desk and the admission team. These people have a significant role in the marketing mix because they are the first to communicate face-to-face with the public (Stott & Parr, 1991). In order to positively influence the student's choice behaviour, it is recommended that the institutions pay particular attention to the enrolment staff members' training and motivation (Dennis, 1998).Students usually speak with these people about their needs and whether the institution is able to satisfy them. Therefore, it is important for the enrolment team members to know what information students and their guardians require in order to prepare them to answer. Achievement in the field of technical education from the HND level should be made available to prospective customers in the form of photo shows and documentaries at the point of purchase and in other attractive platforms. This should encourage the customers to anticipate what the future holds for them as they purchase technical education offering. Documentaries and photo shows of successful technically trained alumni could be made available for prospective students' consumption. Past students in the technical fields and technocrats could be engaged to take students through the unique advantages of pursuing technical education programmes.

Proof of Performance

It is worthy to note that student's choice behaviour of a university does not end with a purchase decision. After enrolling in an institution and experiencing the service, a student usually assesses whether the programme or the institution lived up to their expectation (Brassington, 2006). At this stage, students begin to compare with their standards, judgement and opinion about the experience (Lovelock & Wirtz, 2013). A student might do post purchase evaluation of whether they are receiving value for money, time and effort. They may also assess whether or not they have made the right decision by enrolling at that specific university. The way they arrive at an answer will determine whether they establish an attitude which can either be negative leading to dissatisfaction, or positive leading to satisfaction (Kotler & Armstrong, 2008).

It is critical that technical universities produce satisfied students. This means that marketing effort does not end when a student has enrolled. The institutions should establish a lasting relationship with students' right from admission till completion and even beyond. This marketing approach to managing students should help a university with satisfied students has a higher probability of retaining its students for the subsequent years (Dennis, 1998), and to build up the university's reputation and creates an indirect word-of-mouth promotional campaign (Al-Alak, 2006). Performance should be measured against expectations from time to time in order to bridge any gaps that might exist either perceived or real. Documentaries of successful past students of technical education, both local and international can be a source of proof to customers. Technical universities could also organize workshops where past technical students shall have the platform to interchange encouragement with students.

Pro-entrepreneurship

As the Polytechnics re-engineer to technical education, they do so not only with their science and technology programmes, but also the business programmes. One question that is worth considering is how could the polytechnics handle business programmes at the era of technical education? It is therefore important that technical education emphasis entrepreneurship in all its programmes, particularly business programmes in order to distinguish it from that of the traditional universities. The importance of entrepreneur in the affairs of nations and their people is of great importance to both academics and practitioners (Garba, 2010; Keat, Selvarajah & Meyer, 2011). It is a popular belief that advancement of developed countries in the global market place could be attributed to attention given to entrepreneurship as a means to reduce unemployment and address issues of poverty (Venkatachalam & Waqif, 2005; Gurol & Atsan, 2006). This suggests if technical universities are proactive in emphasising the entrepreneurial nature of the programmes, they are likely to inculcate into the prospective students hope of having jobs to do after enrolling and completing a programme which could make them prosperous and competitive in the global market environment (Kuratko & Hodgetts, 2004; Schaper & Vorely, 2004). In this connection, technical education institutions should link entrepreneurship with its unique features of job creation, wealth creation and economic sustainability to technical education (Lena & Wong, 2003; Schaper & Vorely, 2004). The school curriculum should be designed in such a way to inculcate the spirit of entrepreneurship (Kantis, Ishida & Komori, 2002). The philosophy is that education in general and higher education in particular provide the basis for gainful employment in recent times (Seet & Seet, 2006). Thus, in order to rekindle the hope of higher education's role to investment in education and training that produce a return for the individual and the society as a whole (Alam, 2007), technical university must take the entrepreneurship components of the programmes seriously.

The model of marketing technical education is represented by figure 1.

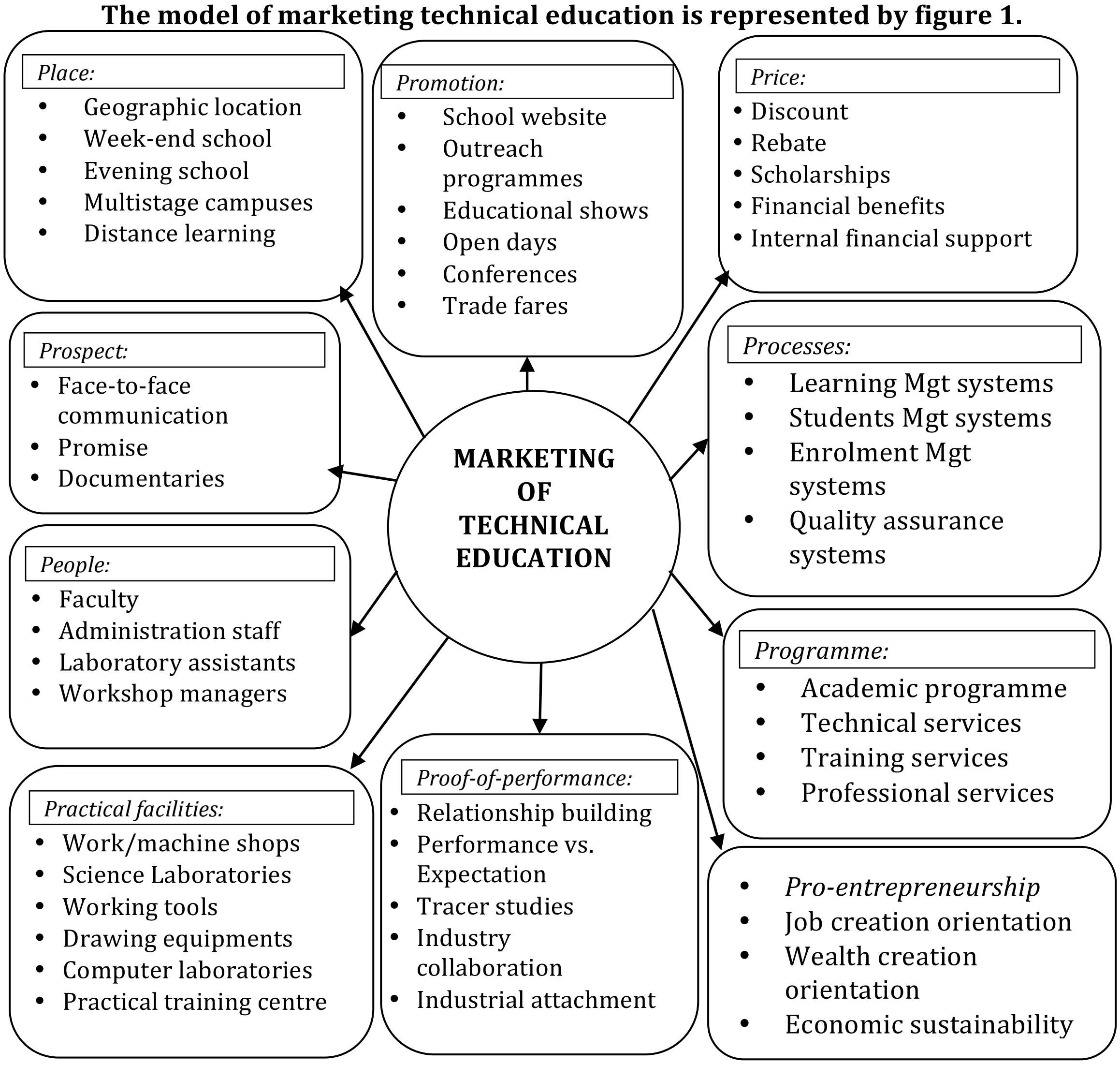

Figure 1: A Model of Marketing Technical Education

CONCLUSION

Starting from the premise of the need to market technical education, this paper identifies the primary role of marketing as a strategic tool to implement, sustain and evaluate the emergence of technical universities in Ghana. The primary task of marketing is establishing the coordination of elements necessary for the marketing of the institutions. While the reengineering has tended to concentrate upon the issues of policy formulation and timely implementation, the complexity of marketing the programme, especially when the traditional universities have already caved the niche for themselves, point to the fact that adoption of marketing approach to the implementation and sustainability are not trivial issues. With students' enrolment being a critical part of the success of the transformation of the Polytechnics to Technical Universities, the implications for the effective application of the marketing mix and the management of the students' choice decision making process are profound.

The theories of human capital and resource based view support the model of the marketing mix model suggested by the current study. An interesting feature of the 10Ps model is that it offers a theoretical basis for understanding a number of areas that the Technical Universities would have to concentrate to make the offerings competitive and sustainable. These include the design of programmes that meet the current needs of students and the job market; charging reasonable fees that is low enough to attract more enrollment but high enough not to undermine the perceived quality of the programme. It also include effective communication of the programme to current and prospective students and their parents; ensure convenient and assessable delivery of programme; recruit and train the right caliber of staff to manage the process; and put the right systems in place to support effective running of the institutions. Other areas include, providing fitting and comfortable practical facilities in the form of laboratories, workshops and drawing room. Finally, there should be defined hope for the students to enable them identify the future prospects of the programmes they purchase; while at the same time tangible and concrete evidence of achievement in the field of technical education are made manifest; and designing programmes that give credence to entrepreneurial acumen.

The primary driving force behind this marketing mix has been the quest for students' value maximization and enhances stakeholders' ability to do cost-benefit analysis of the investment in technical education. If the unique feature of the institution's programme is skill and professional development, if the programme is industry relate, if the programme promises jobs, then the theoretical foundations of choosing technical university is supported. The important difference between the technical universities and the tradition universities is the emphasis which the current marketing mix model brings to the fore for the provision of the technical university education in Ghana. It is the task of the institutions to turn each decision of the customer to concrete actions, from the need recognition to the post-purchase reaction.

This paper has attempted to adapt and expand the previous literature on marketing mix model by given due attention to application of marketing to the study of technical university education. The emphasis upon the 10Ps marketing mix model as the primary actor in marketing technical university is essential to analysing the reengineering of polytechnics to technical universities and the role of the institutions to create a market niche.

Research shows that though technical education has been a powerful influence in development planning, indiscriminately offering of technical education may have negative impact on development (Bennell, 1996). Thus, it behooves on government not to rush into transforming all polytechnics to technical universities. A polytechnic institution must meet the required set standard before it is roved into the technical university status. The process should be gradual and be based on a polytechnic's readiness so as to produce the desired human capital (Colin, 1999; Alam, 2007)

LIMITATIONS AND FUTURE RESEARCH

In fact, what seems to be missing in this analysis is that in order to achieve a better understanding of the marketing strategies and mix, and reach into an effective marketing strategy, there is the urgent need to understand customer demands, preferences and buying behaviour empirically. In other words, the design of each of the marketing mix elements should depend on customer analysis from a survey (Peter & Olson, 2008). However, since this study is more of a model building than empirical study, no such data were collected. Future studies can consider collecting empirical data to test the model developed to add more coherence, relevance and depth to the issue of technical education marketing.

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Evaluating the Credit Risk Management Practices of Microfinance Institutions in Ghana: Evidence from Capital Line Investment Ltd. And Dream Finance Ltd.

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Abstract

Several factors are constraining the continuous growth of the microfinance sector in Ghana among which are high risk of defaulting loans and how to ensure effective management of credit risk so as to simultaneously maximize returns on assets and minimize defaulting loans. Using a survey approach and convenience non–probability sampling technique, we applied the Risk Management Feed-back Loop concept proposed by GTZ (2000) to evaluate the credit risk management policies employed by microfinance firms in their quest to manage credit risks in order to minimize defaulting loans. The results of the descriptive analysis indicate that credit risk is the most significant risk that poses a great threat to the overall survival of microfinance firms. The study also revealed that ineffective client information verification system increases the rate of bad loads in microfinance companies. Based on our findings, we recommend that in order to ensure improvement in the performance of microfinance institutions, measures that seek to reduce credit risks should be strengthened. More so, in order to reduce the level of bad debts in the loan portfolios of microfinance firms, we recommend that the system for verifying client information before loan disbursements should be strengthened. Specifically, a detailed scrutiny of the client should be made before making loan disbursements.

Key Words: Credit Risk, Capital Line Investment Ltd., Ghana, Microfinance

INTRODUCTION

Microfinance institutions serve some of the world's most financially challenged population and informal sector enterprises that otherwise would be denied access to banking services owing to the stringent requirements of commercial banks in granting credit facilities to their clients. In a developing country like Ghana where small and medium scale enterprises contribute significantly to GDP and employment generation, microfinance institutions play a critical role in the economic development process by providing credit facilities to finance both capital investments and short term liquidity needs of the unbanked business units. According to

Mawuko-Yevugah (2013) there has been a tremendous growth in the number of microfinance institutions operating in most developing countries around the globe, including those in Africa, serving as a vital source of credit for individuals, small and medium-scale businesses in need of small loans and financing options but not served by the large commercial banks. Ghana in particular has seen a significant growth of the microfinance industry in the last few decades with the number of registered institutions reaching about 90 as at February 2013 (Bank of Ghana, 2013)

In the view of Asiamah and Osei, (2007) microfinance has been an integral part of Ghana's finance history through the practice of people saving and/or taking small loans from individual lenders and corporative organization to start businesses or farming ventures. In the last three decades, Ghana's microfinance sector has grown to become an important arm of the country's financial sector with the help of various financial sector policies and programmes undertaken by different governments since independence. Notable among these financial sector reforms are: (1) the establishment of the Agricultural Development Bank in 1965 specifically to meet the financial needs of the fisheries and agricultural sector; (2) the establishment of Rural and Community Banks (RCBs), and the introduction of regulations such as commercial banks being required to set aside 20% of total portfolio, to promote lending to agriculture and small scale industries in the 1970s and early 1980s; (3) shifting from a restrictive financial sector regime to a liberalized regime in 1986; and (4) the promulgation of PNDC Law 328 in 1991 to allow the establishment of different categories of non-bank financial institutions, including savings and loans companies, and credit unions (Asiamah&Osei, 2007).The above policies among others have culminated into the emergence of three broad categories of microfinance institutions in Ghana. These are: (1) formal credit providers such as savings and loans companies, rural and community banks, as well as some development and commercial banks; (2) semi-formal financial intermediaries such as credit unions, financial non-governmental organizations, and cooperatives; and (3) informal credit suppliers such as susu collectors and clubs, rotating and accumulating savings and credit associations such as traders, moneylenders and other individuals (Bank of Ghana, 2008).

Small and medium scale enterprises (SMEs) contribute between 23% and 30% to the annual GDP of Ghana and accounts for more than 40% of the country's labour force (Asiama and Osei 2007). Majority of these businesses derive their investment capital and short term financial needs from microfinance institutions. The rapid growth of SMEs over the years have necessitated an increased demand for credit and financial services to which the microfinance sector has responded appropriately and thereby seen a significant growth in their loan asset portfolios over the last few years. This notwithstanding, several factors are constraining the continuous growth of the microfinance sector in Ghana among which are high risk of defaulting loans and how to ensure effective management of credit risk so as to simultaneously maximize returns on assets and minimize defaulting loans. Steel &Andah, (2003) assert that one critical problem militating against the growth of microfinance enterprises is the difficulties pertaining to the recovery of credits granted. In as much as many microfinance enterprises in Ghana experience rapid growth after their establishment; serving more customers in larger geographic areas and offering a wider range of financial services and products, the key problem is that their capacity to effectively manage risk and their risk management systems are often behind the scale and scope of their activities (GTZ, 2000).

In order to reduce Ghana's poverty incidence to the barest minimum, the country's microfinance sector is regarded as a critical financial anchor and expected to expand its services to promote universal access to credit and a range of financial services to a significant segment of the unbanked population and informal sector enterprises. From the foregoing, some concerns that arise are: how does the mounting expectation and expansion in credit of microfinance institutions impact on risks faced by the sector itself? And how are these purported risks managed to minimize their negative effects on the country's microfinance sector? To address these concerns, the present study seeks to investigate the different types of risks and credit risk management practices of microfinance institutions in Ghana through the lens of Capital Line Investment limited and Dream Finance Limited.

LITERATURE REVIEW

The term microfinance has been broadly defined as the provision of small scale financial services to the people who for one reason or the other lack access to traditional banking services offered by large commercial banks. The concept of microfinance is often related to very small loans to low-income clients for self-employment, with repayments usually structured into periodic fixed installments over a predetermined loan period (Gyamfi, 2011). According to Greenberg (2009) microfinance is the provision of financial services to deprived and low-income people with the ultimate objective of eradicating poverty particularly in the developing world. Murdoch (2000) also contends that "Microfinance Institutions (MFIs) refer to financial institutions which provide financial services to poor economic agents who are typically excluded from the formal banking system for lack of sufficient collateral". From the above definitions it is evident that the essence of microfinance as contended by Brandsma and Chaouli (1998) is to provide financial services to low-income groups and individuals who are not able to meet the collateral and other requirements of the traditional banking system and hence denied credit and other financial services by these banks.

GIZ (2000) defines risk as the possibility of an adverse event occurring and its potential for negative implications to an individual, a project or institution. Like all other financial institutions, microfinance institutions (MFIs) face risks that they must manage efficiently and effectively to be successful. Risks are significant if the probability of occurrence or the severity of the potential impact is high. Many risks are common to all financial institutions. From banks to unregulated MFIs, these include credit risk, liquidity risk, market or pricing risk, operational risk, compliance and legal risk, and strategic risk. According to GIZ (2000) Most risks can be grouped into three general categories: financial risks, operational risks and strategic risks.Mawuko-Yevugah (2012) defines credit risk as the potential that a borrower or counterparty will fail to meet its obligations in accordance with the terms and conditions of a loan contract. GIZ (2000) also defines credit risk as the risk to earnings or capital due to borrowers' late or non-payment of loan obligations. From the above definitions, it can be deduced that credit risk encompasses both the loss of income emanating from the MFI's inability to collect anticipated interest earnings as well as the loss of principal resulting from loan defaults. Since most loans advanced by MFIs are unsecured, these loans are usually exposed to a great deal of credit risk. In the literature, credit risk has been adjudged to be the most prevalent risk faced by microfinance institutions. As MFIs compete for customers and resources, the risks associated with their activities tend to rise. Those MFIs that manage risk effectively by developing systematic approach that applies across product lines and activities and considers the aggregate impact or probability of risks – are less likely to be taken aback by unexpected losses (down-side risk) and more likely to build market credibility and capitalize on new opportunities (up-side risk) (GIZ, 2000). The adoption of a risk management framework by an MFI makes it feasible for senior managers and directors to make well thought-out decisions about risk, to identify the most suitable approaches to manage those risks, and to develop an internal mechanism that rewards good risk management without discouraging risk-taking. According to GIZ (2000) effective risk management demands that an organization adopts four key steps: (1) Identify the risks facing the institution and assess their severity (either frequency or potential negative consequences), (2) Measure the risks appropriately and evaluate the acceptable limits for that risk, (3) Monitor the risks on a routine basis, ensuring that the right people receive accurate and relevant information; and (4) Manage the risks through close oversight and evaluation of performance.

Risk management is generally considered as the identification, assessment, and prioritization of risks followed by an organization and the economic application of resources to reduce, monitor, and check the likelihood and effects of unfortunate events or to maximize the realization of opportunities (Mawuko-Yevugah, 2012). In the context of financial institutions, an established system that checks repayment of loans by borrowers is very critical in averting asymmetric information problems and minimizing the rate of loan defaults (Basel, 1999). A workable credit risk management (CRM) framework entails the development of an appropriate credit risk (CR) environment; working under a healthy credit lending process; maintaining an appropriate credit administration that necessitate the monitoring process and adequate controls over credit risk (Greuning & Bratanovic, 2003). According to Siegel & Alwang (2001) risk management strategies are adopted to minimize risk problems ex ante whereas risk coping strategies address risk problems ex post. Risk management in microfinance is the process of managing the probability or the severity of the adverse event (e.g loan defaults) to an acceptable range or within limits set by the MFI (GTZ, 2004). A comprehensive approach to risk management reduces the risk of loss, builds credibility in the market place, and creates new opportunities for growth.

Armendariz and Morduch (2000) have highlighted several important mechanisms that allow MFIs to generate high repayment rates from poor borrowers without requiring collateral. These mechanisms include the use of group lending contracts, non-refinancing threats, regular repayment schedules, collateral substitutes, and the provision of nonfinancial services among others. One of the major mechanisms that most MFIs employ is group lending. Group lending refers specifically to arrangements by individuals without collateral who get together and form groups with the aim of obtaining loans from a lender. According to Kono and Takahashi (2010), in the typical group lending scheme: (a) each member is jointly liable for each other's loan, (b) if any members do not repay, all the members are punished (often in the form of denial of future credit access), and (c) prospective borrowers are required to form groups by themselves. Group lending model has attracted an enormous amount of public and academic attention mainly after the success of group lending program in Grameen Bank. In addition, joint liability in group lending reduces the problem of moral hazard by increasing borrower’s incentives to monitor each other and then to repay the loan. In sum, group-lending mechanism can potentially deal with information asymmetry, and therefore reduces risk-taking and improves the lender’s repayment rate.

Field and Pande (2008) reported that regular payment schedule provide clients a credible commitment device, which enables them to form the habit of saving regularly. They noted also that frequent meetings with a loan officer may improve client trust in loan officers and their willingness to stay on track with repayments. According to Ibtissem and Bouri (2013), this early regular repayment schedules may exclude potential borrowers who have a single source of income from the market. These borrowers are mostly present in areas focused sharply on highly seasonal occupations like agricultural cultivation. The income generation of agriculture areas is unstable and regular repayment schedules are difficult to respect.

From the review, we note that the three major categories of risks faced by MFIs are financial risk, operational risk and strategic risk; and that the prime function of any financial institution is to manage financial risks, which consist of credit risks, liquidity risks, interest rate risks, foreign exchange risks and investment portfolio risks. However, credit risk stands tall among the list of financial risks as the most prevalent and threatening risk faced by microfinance institutions. More so, the review has brought to light that the most common credit risk management practices adopted by MFIs to mitigate credit risk are: group lending contracts, institution of dynamic incentives, collateral substitutes and repayment schedules.

METHODOLOGY

The underlying framework for the study is The Risk Management Feedback Loop concept proposed by GTZ (2000). The feedback loop integrates several different areas of management: policies from the board, specific guidelines and procedures for operations, management information reporting, internal controls, and overall financial management (e.g. capital adequacy, liquidity, and resource allocation). The risk management feedback loop has six key components:

1. Identifying, assessing, and prioritizing risks
2. Developing strategies and policies to measure risks
3. Designing policies and procedures to mitigate risks
4. Implementing and assigning responsibilities
5. Testing effectiveness and evaluating results
6. Revising policies and procedures as necessary

The study uses the components of the risk management feedback loop to measure and analyze the effectiveness of the credit risk management practices of the MFIs.

The study employs both primary and secondary data for its analysis. The population for the study comprised of staff members, specifically credit analyst and loan officers for each institution. For the primary data collection, questionnaires were administered to selected credit analyst and loan officers from three branches of each of the two firms (Capital Line Investment Ltd and Dream Finance Ltd) in Accra. A sample size of 15 (loan officers and credit analyst) were selected from each of the two firms for the study. 13 of the respondents from Dream finance returned the completed questionnaire. This gives a response rate of 86%. 10 from Capital Line returned the completed questionnaire representing a response rate of 66%. Convenience non – probability sampling technique was used in selecting the respondents. We visited the three branches of each of the two firms at random time periods and questionnaires were administered to staff members from the credit department (credit analyst and loan officers) who were around during the visit. Gyemibi et al (2011) argues that this sampling technique helps to reduce bias in sampling as the researcher has no a priory information of the respondents who will be selected. We also held interviews with the management of the two firms to get information on managerial decisions pertaining to credit risk management. Secondary data was sourced from the annual reports and the official website of the two firms.

The study employs descriptive statistics (graphs, charts and tables) to analyze the risk factors associated with the operations of the two firms and to help identify the most significant risks factors for each firm. The effectiveness of the risk management policies of the firms are measured by the extent to which they conform to the six components of the risk management feedback loop concept proposed by GTZ (2000).

RESULTS AND DISCUSSION

Types of Risks

The responses to the question on the types of risk faced by Capital line investment revealed that the different risked faced by the institution in its operation in order of importance are credit risk, liquidity risk, and market or interest rate risk among others. It is worth noting that all the 10 respondents (100%) stated that credit risk is the most significant risk that poses a great threat to the overall survival of the company. For Dream Finance Ltd., the risks the institution commonly faces in order of significance are credit risk, liquidity risk and operational risk. More specifically, all the 13 respondents who, participated in the survey asserted that credit risk has been the most prevalent risk in the day-to-day operations of the company.

The overwhelming significance of credit risk in the operations of Capital line investment and Dream Finance Ltd. is in line with the general trends in the literature. Credit risk has been adjudged to be the most prevalent risk faced by microfinance institutions particularly in developing countries such as Ghana (Mawuko-Yevugah, 2012). This is probably due to the fact that lending has been, by far, the core business of most microfinance institutions including Capital line investment and Dream Finance Ltd., and the high incidence of bad loans and losses suffered by financial institutions in developing countries owing to the existence of unfavourable business environment in most of these countries (GIZ, 2000).

The Effectiveness of credit risk management policies

According to GIZ (2000) the first step in assessing the effectiveness of a credit management policy is the system's capacity to identify and prioritize the different types of risk faced by a Microfinance Institution (MFI). From the analysis so far, it is seen that the two institutions have been able to identify and prioritize the various risk that they face in their operations. Specifically, credit risk has been identified as the most significant risk faced by both Capital line investment and Dream finance ltd.

Microfinance institutions usually measure the intensity of credit risk by the size of loans that are in default (loans going bad and likely to be written off) within a specified period of time. A question was therefore posed to respondents (loan officers and credit analyst) of the two institutions to find out whether the levels of bad debt in their loan portfolios are threatening or not.

From the analysis presented in figures 4.3 and 4.4 in the appendix, only 10% of the respondents from Capital line investment stated that the level of bad debt in the loan portfolios that they manage are threatening whilst 90% claimed that it is not threatening. On the other hand, 61.54% of the respondents from Dream Finance Ltd. agreed to the fact that the levels of bad debt in their loan portfolios are high and threatening to the survival of the company. Judging from the respondents' view on the level of bad debt faced, one can opine that capital line investment has a relatively more effective credit management policy than Dream Finance Ltd., which faces a relatively high rate of loan defaults (see GIZ, 2000).

The risk management feed-back loop concept proposed by GIZ (2000) emphasizes on the effectiveness of credit risk assessment done on loan applications before loans are granted to clients of MFIs. Central to the effectiveness of credit analysis is the quality of information provided by a prospective client and the efficacy of the systems put in place by a microfinance institution to duly verify client information (credit history, evidence of active business owned, cash flow, etc.) before loan disbursements are affected. A question was therefore posed to respondents to find their views on the systems put in place by Capital line investment and Dream Finance Ltd. to verify client information before granting loans to clients. The analysis of the responses is presented as tables 4.7 and 4.8 in the appendix. From the analysis, it is clear that the respondents do not have much confidence in the systems put in place by the management of the two MFIs to certify information supplied by prospective clients during loan applications. For Capital line investment, 50% of the respondents stated that they have confidence in the system whereas 50% stated that they do not have confidence in the client information verification system in the company. For Dream Finance Ltd. only 46.2% of the respondents have confidence in the system for verifying client information whereas 53.8% claim they do not have confidence in the information verification systems put in place by management. The use of fabricated information for credit analysis most likely has an adverse effect on the quality of loans granted. The ineffective systems for verifying client information could be a contributing factor to the high rates of bad debt in the overall loan portfolio of Dream Finance Ltd.

CONCLUSIONS

Several factors are constraining the continuous growth of the microfinance sector in Ghana among which are high risk of defaulting loans and how to ensure effective management of credit risk so as to simultaneously maximize returns on assets and minimize defaulting loans. The study mainly investigates the different types of risks faced by microfinance institutions in Ghana using Capital Line Investments Ltd and Dream Finance Ltd as a case study. The study also analyses the credit management policies that Capital Line Investments Ltd. and Dream Finance Ltd. have employed in their quest to manage credit risks in order to minimize defaulting loans.

Using the primary survey and convenience non – probability sampling technique, the study applied the Risk Management Feed-back Loop concept proposed by GTZ (2000). The feedback loop integrates several different areas of management: policies from the board, specific guidelines and procedures for operations, management information reporting, internal controls, and overall financial management. The study uses the components of the risk management feedback loop to measure and analyze the effectiveness of the credit risk management practices of the two MFIs- Capital Line Investments Ltd and Dream Finance Ltd.

The study has revealed that the different risked faced by Capital line investment in its operation in order of importance are credit risk, liquidity risk, and market or interest rate risk among others. All respondents from Capital Line Investment stated that credit risk is the most significant risk that poses a great threat to the overall survival of the company. On the other hand, the risks that Dream Finance Ltd. commonly faces in order of significance are credit risk, liquidity risk and operational risk. In general, all the 23 respondents who, participated in the survey asserted that credit risk has been the most frequent risk in the day-to-day operations of the company.

In terms of the level of bad debts in the two institutions, the results show that only 10% of the respondents from Capital line investment stated that the level of bad debt in their loan portfolio is threatening whilst 90% claimed that it is not threatening. On the other hand, 61.54% of the respondents from Dream Finance Ltd stated that the level of bad debt in their loan portfolio is high and threatening to the survival of the company. The findings brought to light that capital line investment has a relatively more effective credit management policy than Dream Finance Ltd., which faces a high rate of loan defaults. Furthermore, in terms of the effectiveness of the system for verifying client information before loan disbursements are effected, we found that 50% of the respondents from Capital Line Investment have confidence in the system whereas 50% do not have confidence in the client information verification system of the company.For Dream Finance Ltd. only 46.2% of the respondents have confidence in the system for verifying client information but 53.8% claim they do not have confidence in the information verification systems put in place by management. Lastly, the ineffective systems for verifying client information could be a contributing factor to the high rates of bad debt in the overall loan portfolio of Dream Finance Ltd.

POLICY RECOMMENDATIONS

The results of the descriptive analysis indicate that all respondents from both Capital Line Investment and Dream Finance Ltd stated that credit risk is the most significant risk that poses a great threat to the overall survival of the two companies in their day-to-day operations. Therefore, based on this finding, we recommend that in order to ensure improvement in performance of microfinance institutions, measures that seek to reduce credit risks should be strengthened. More so, in order to reduce the level of bad debts in the loan portfolios of microfinance firms, the study recommends that the system for verifying client information before loan disbursements should be strengthened. Specifically, a detailed scrutiny of the client should be made before making loan disbursements.

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E-Marketing as a Business Advantage for Improving Sme's Competitiveness in Lombok Island - Indonesia

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Abstract

The success of Small and Medium Enterprises (SMEs) is the availability of a clear market for the products. Meanwhile, the fundamental weaknesses faced by SMEs in marketing are low market orientation, weakness in a complex and sharp competition and inadequate marketing infrastructure. Faced with an increasingly open market mechanisms and competitive, market control is prerequisite for improving competitiveness. Therefore, expansion of market access with Web-based Information Technology is now needed as a medium for global communication. One thing that gives a competitive advantage in international trade competition is information technology of electronic marketing or e-marketing. This paper intend to shows the important role of e-marketing for SMEs in Lombok Island - Indonesia and how to develop the model of e-marketing.

Keywords: small and medium enterprise, information technology, e-commerce, competitive advantage

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INTRODUCTION

The era of globalization is now also known as the New Economy Era, the Digital Economy Era. New Economy era marked by the application of Information Technology in running the economy. Application of Information Technology is now necessary in this era of globalization. Application of Information Technology required is development model of web-based business applications for small and medium enterprises (SMEs) in order to increase competitive advantage.

Small and Medium Enterprises (SMEs) have an important role in the economic and industrial growth of a country. Recognizing the role of SMEs in the economy of this country, it is appropriate if more government attention devoted to promoting self-reliance and success of businesses in this sector. The groups of SMEs in Lombok Island – Indonesia can be seen in Table 1.

Table 1 Groups of SMEs in Lombok Island – Indonesia

NO	CITY/DISTRICT	GROUPS OF SMEs	PRODUCTS
1	MATARAM	1. Sentra Kerajinan Cukli	Kerajinan Kayu Cukli
		2. Sentra Bebetek	Bebetek
		3. Emas Perak dan Mutiara	Mas Perak dan Mutiara
		4. Kerajinan Tahu Tempe	Tahu dan tempe
		5. Sentra Tahu Tempe	Tahu dan tempe
		6. Sentra Kerupuk Kulit dan Tanduk	Kerupuk Kulit dan Tanduk
		7. Sentra Konveksi	Konveksi
2	WEST LOMBOK	1. Sentra Gerabah	Gerabah
		2. Sentra Kerajinan Kayu Cukli	Kerajinan Kayu Cukli
		3. Sentra Kerajinan Bambu	Kursi dan Meja
		4. Sentra Anyaman Ketak	Ketak
		5. Sentra Makanan Olahan	Dodol
		6. Sentra Kerupuk Kulit	Kerupuk Kulit
		7. Sentra Tenun Ikat Gumise	Tenun Songket
		8. Sentra Makanan Olahan	Kue Kering
		9. Sentra Kerajinan Batok Kelapa	Meubler
		10. Sentra Kerajinan Genteng	Genteng Bata
3	NORTH LOMBOK	1. Sentra Kerajinan Bambu	Tusuk Sate dan Gigi
		2. Kerajinan Tenun	Kain Tenun
		3. Kerajinan Bambu	Bakul, Keranjang
		4. Kerajinan Batok Kelapa	Meubler
		5. Kerajinan Pasir dan Batok Kelapa	Bingkai, Mangkok, Piring dll
		6. Sentra Makanan Olahan	Pisang Sale
4	CENTRAL LOMBOK	1. Sentra Kerajinan Ketak	Ketak
		2. Sentra Kerajinan Tenun	Tenun
		3. Kerajinan Perak	Perak
		4. Kerajinan Gerabah	Gerabah
		5. Sentra Makanan Olahan	Makanan Olahan
		6. Sentra kerajinan Ketak	Ketak
		7. Sentra Kerajinan Tenun	Tenun
		8. Sentra Kerajinan Tenun	Tenun
5	EAST LOMBOK	1. Kerajinan Bambu	Bebetek
		2. Sentra Kerajinan Gerabah	Gerabah
		3. Sentra Tenun	Tenun
		4. Sentra Konveksi	Konveksi
		5. Sentra Kerajinan Tenun	Tenun
		6. Sentra Kerajinan Tenun	Tenun

Source: The Department of Cooperatives and SMEs, West Nusa Tenggara, 2016

The general objective of this research is to support the achievement of the ease, efficiency, effectiveness in conduct business transactions and providing information that is accurate, timely and relevant so that business transformation can be done quickly and accurately. Additionally is to facilitate communication, exchange of data and information, cooperation with organizations / companies to quickly and accurately. The specific objective is to develop a model for the Web-based Business Applications for group of Small and Medium Enterprises (SMEs). All of these activities aim to support the strategic plan for excellence in competition to expand market share in the country and abroad.

LITERATURE REVIEW

E-marketing must be defined to include the management of the consumer's online experience of the product, from first encounter through purchase to delivery and beyond. Digital marketers should care about the consumer's online experiences for the simple reason that all of them -- good, bad, or indifferent -- influence consumer perceptions of a product or a brand. The web offers companies' ownership and control of all interactions with customers and thus creates both the ability and the need to improve their overall experience.

There are two reasons for building the concept of e-marketing around consumer experiences. First, this approach forces marketers to adopt the consumer's point of view. Second, it forces managers to pay attention to all aspects of their digital brand's interactions with the consumer, from the design of the product or service to the marketing message, the sales and fulfillment processes, and the after-sales customer service effort.

Today definitions of e-marketing or e-commerce is very broad and much, because each author has a different point of view with other authors. In this paper, the author gives the definition given by Turban (2010) describes the process of buying, selling, transferring, serving, or exchanging products, services, or information via computer network Including the Internet. In the new economy era, there are some changes from the old economic era (Table 2).

Table 2. The Comparison of New Economy vs Old Economy

No	Activities	New Economy	Old Economy
1.	Buying	Buyers surf to the web	Buyers walk to the store
2.	Products order	Through the web feature	On the store
3.	Marketing activities	Social media, search engine, on-line ads	Brochure, leaflet, banner, M to M
4.	Physical evidence	Digital catalog or on-line catalog	Must have store to displayed the products
5.	Marketing cost	Cheaper relative	More expensive
6.	Consumer reach	Wider	Narow

Source: Turban (2010)

The challenges faced by small entrepreneurs can be divided into two categories: the first is a Small Business with turnover less than Rp.50, 000,000 general challenges faced is how to protect the viability of their business. They can do their selling activities is enough? They generally do not require a large capital for production expansion, capital usually required just to smooth their cash flow. The second is a Small Business with turnover between Rp. 50,000,000, - up to Rp. 1,000,000,000, - the challenge is much more complex. Generally they start thinking of doing further business expansion. The problems are (1) do not have a system of financial administration and good management, because it is not the separation of ownership and management of companies; (2) the issue of how developing a proposal and a feasibility study to obtain loans from banks and venture capital for small businesses complain most convoluted procedure of getting loans, collateral is not eligible, and the interest rate is overvalued; (3) issue of business planning for the competition to capture the increasingly fierce market; (4) The issue of access to technology, especially if the market is controlled by a company / group of certain businesses and fast-changing consumer tastes; (5) problems obtaining raw materials, primarily due to the intense competition in obtaining raw materials, low-quality raw materials and high prices of raw materials; (6) issues of quality improvement and efficiency of goods, especially for those who are working on the export market due to rapidly changing consumer tastes, the market is controlled by a particular company, and many substitutes; (7) labor problems because it is difficult to get a skilled workforce (Kuncoro, 2000).

The 7 Cs of E-Marketing

The Internet allows for the entire sales cycle to be conducted on one medium, nearly instantaneously. From making the consumer aware of the product to providing additional information to transacting the final purchase, the Internet can accomplish it all. The Internet is like one big point-of-sales display, with easy access to products and the ability for impulse shopping. Impulse shoppers have found a true friend in the Internet. Within seconds from being made aware of a product, consumers can purchase it online. Further, with the targeting techniques available to advertisers, consumers who turn down a product because of the price can be identified and served a special offer more likely to result in a purchase. In the right hands, with the right tools, the Internet really is an advertiser's dream come true.

As opposed to the 4 Ps of brick-and-mortar marketing, the changing outlook in the area of e-marketing can be explained on the basis of 7 Cs of e-marketing.

Contract: The e-marketer's first goal is to communicate a core promise for a truly distinctive value proposition appealing to the target customers.

Content: refers to whatever appears on the website itself and on hot linked websites. If chosen appropriately, it can increase both the rates at which browsers are converted into buyers and their transactions.

Construction: The promises made by e-marketers are not unique to the Internet, but the medium's interactive capabilities make it easier for them to deliver on their promises quickly, reliably, and rewardingly.In practice, this means that promises must be translated into specific interactive functions and Web design features collectively giving consumers a seamless experience. Such design features as one-click ordering and automated shopping help deliver the promise of convenience.

Community: Through site-to-user and user-to-user forms of interactivity (such as chat rooms), e-marketers can develop a core of dedicated customers who become avid marketers of the site too.

Concentration: Targeting through online behavioral profiling. Advertisers have known for some time that behavioral targeting (a.k.a., profiling) is vastly superior to simple demographic targeting. Knowledge of a consumer's past purchases interests, likes/dislikes, and behavior in general allows an advertiser to target an advertisement much more effectively. Department stores have long kept track of consumers' past purchases. They are thus able to project what other types of products a consumer might be interested in and then send an appropriate coupon or sale offer. Credit card companies are the ultimate gatherers of behavioral targeting information. They maintain vast databases of cardholders' past transactions, and they sell lists of this data to advertisers. The same type of behavioral model is forming on the Internet. Publishers and advertisement networks monitor the items that a consumer has expressed interest in or purchased on a site (or network of sites) in the past and target advertisements based on this information.

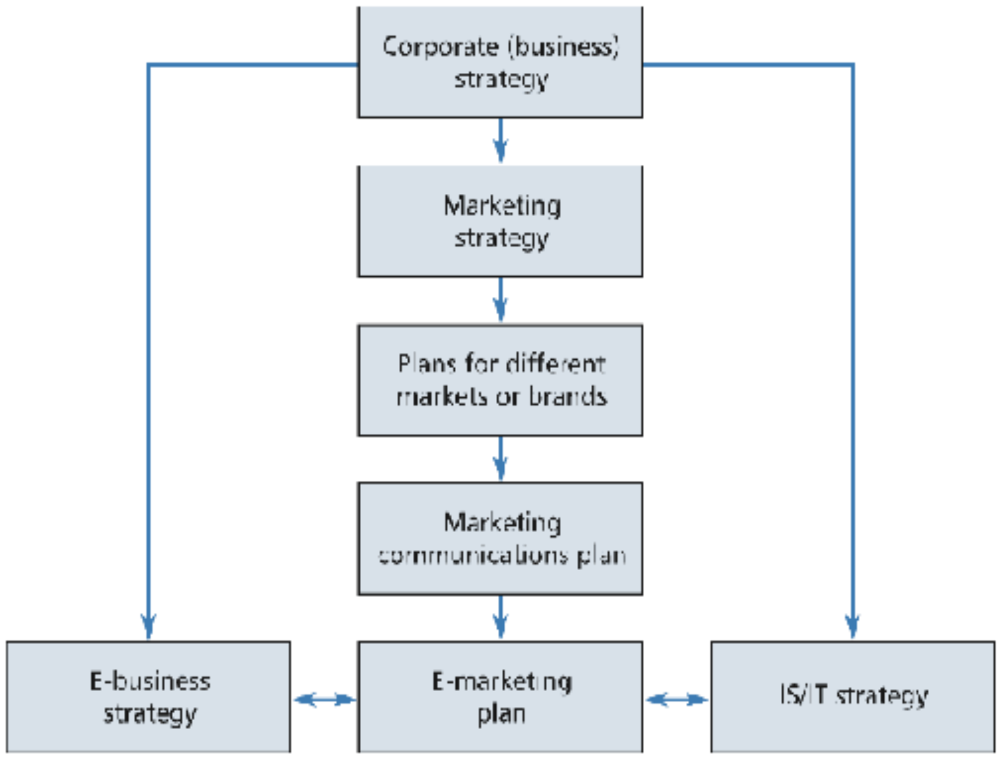
Convergence: We will soon enter the next round of the E-marketing battle as broadband reaches the masses. The Internet will become more ubiquitous and wireless; televisions will become more interactive; video/data/voice appliances will converge; brand advertising and direct marketing practices will integrate; domestic brands, commerce and marketing will become even more global; and big marketing spenders will spend more money online. Many companies that are well positioned today will need to continue to evolve to take advantage of the opportunities. The success of Internet advertising companies will largely be driven by how they maneuver among the coming developments. Rich media, brought on by broadband, will allow advertisers much greater creativity by bringing in new types of advertising to the Internet, as well as enhancing some of the more traditional forms. Broadband technology will allow the convergence of television and the Internet. Dubbed "interactive TV," in its simplest form, will consist of a television with some interactive capabilities. Basically, a user will see a television screen that is three-quarters traditional television, but with a frame that has Internet capabilities. This frame will allow users to access up-to-the-minute sports scores or news on the Web, for example. More importantly for E- marketers, it would allow viewers to immediately leap to the website of an advertiser whose ad was being shown. The user could find out more information or order the product right there.

Commerce: The last emerging fundamental of e-marketing is commerce, whether it includes offering goods and services directly, or marketing those of another company for a fee, thus helping to cover the fixed costs of site operations and to offset customer acquisition costs (Prashant Sumeet, www.brandchannel.com, 2016).

According to Chaffey (2011, p. 388), e-marketing plan is the planning to reach marketing objective in e-business strategy. E-marketing plans is an addition for the specific e-business strategy which describe the objective spesificly through the marketing activities as marketing research and marketing communication. SOSTAC framework developed by Paul Smith (1999), used to develop e-marketing strategy and its implementation step by step. The analysis have to answer the question on each step below:

1. Situation – where are we now?
2. Objectives – where do we want to be?
3. Strategy – how do we get there?
4. Tactics – how exactly do we get there?
5. Action – what is our plan?
6. Control – did we get there?

In Figure 2. Show how e-marketing activities creates e-business strategy and built e-marketing strategy plan. Our concern is on the activities on the box.



Figur 1 E-marketing Plan in different context of planning
Source: Schaffey, 2011

METHODS

The method used in this research is the conceptual framework and empirical based review of the literature related to information technology, small and medium enterprises, e-commerce and e-marketing.

DISCUSSION

Application Design

In this research aplication design folow the SOSTAC framework developed by Paul Smith (1999) and rely on Turban's e-commerce transaction concept that involves three parties inside the concept. Through e-commerce transaction involves three parties (Figure 2), namely: suppliers / partners, managing web site (our company) and customers (customers) These three parties are interconnected to run e-commerce transactions, however in this research, we are concern to design the application in the box at first relay on the problem priority of SMEs in Lombok Island – Indonesia.

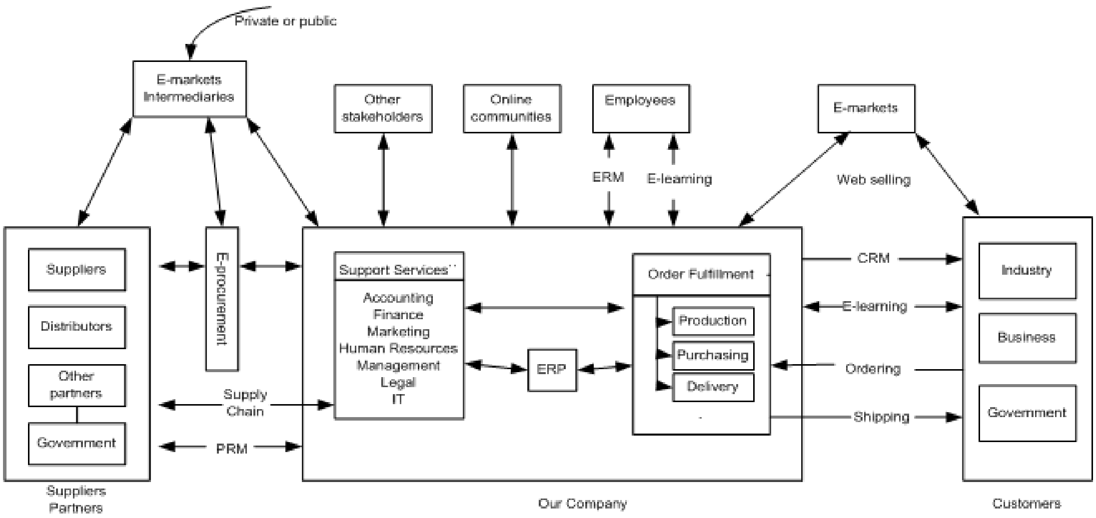


Figure 2 Application Design Concept (Turban, 2010)

Overall in the application to be constructed showing that the companies buy goods such as raw materials, goods for resale or services from its suppliers and business partners in a procurement process. Department of others such as finance, marketing support company activities.

The basic idea of e-marketing is the process of automation of every process in the company as at the start of the process of ordering goods, procurement of goods, delivery of goods to customers and even better service to its customers by creating a Customer Relationship Management (CRM). Customer Relationship Management is a marketing strategy that is to get customers and retain customers so that those customers will be loyal to the company.

Facing of increasingly open markets and competition, market control is a prerequisite to improve the competitiveness of SMEs. In order to dominate the market, SMEs need to get information easily and quickly, both information regarding the market for the output and the resources of production factors. Information on the results of market production is needed to expand the marketing of products produced by SMEs.

Commodity market information such as: (1) the type of goods are needed by consumers in certain areas; (2) how the purchasing power of such products; (3) how the prevailing market price; (4) the tastes of consumers in the local market, regional, and international levels.

According to Ishak (2005) information about market inputs are also needed, especially for determine: (1) a source of raw materials needed; (2) the price of raw materials to be purchased; (3) where and how to obtain venture capital; (4) where getting a professional workforce; (5) the level of wages or salaries eligible for workers; (6) which can obtain the tools or machines are needed.

Utilization of the Internet makes SMEs are able to do marketing with the purpose of the global market, so the opportunity to penetrate the export is very likely. Suyanto (2005) give an opinion about the positive things that can be obtained by utilizing the Internet in developing the business are (1) can increase the promotion of products and services through direct contact, information, and interactive with the customer (2) creating a distribution channel for products No (3) the cost of sending information to customers more efficient when compared to the package or postal services (4) the time required to receive or send information very briefly, just in a matter of minutes or even seconds.

Implementation of e-marketing should also be supported by the system of payment and order fulfillment of the buyer, which is a portal containing content from the company. Means necessary to build the things mentioned above are categorized in e-infrastructure (generally contains systems that integrate the parts are interconnected, hosting, security, network wireless, network), e-process (generally a matter of payments and logistics) , e-market (generally a matter of marketing and advertising), e-communities (the problem of audience and business partners), e-service (Customer Relationship Management, Partnership Relationship Management and services that matter), e-content (supported by your provider content). All forms must exist to support the activities of e-commerce.

E-marketing transactions can be made by several parties. Common are as follows: (1) business-to-business (B2B) – in this transaction, both parties either buyer or seller is the company's organization; (2) business-to-consumer (B2C) – in this transaction, the seller is the organization, while the buyers are individuals. B2C is also known as e-tailing. E-tailing (Electronic Retailing) is the sales transactions either in the form of goods or services performed directly by using electronic storefronts or electronic malls; (3) consumer-to-consumer (C2C) – in this transaction, the seller is an individual who sells goods or services also to the individual. So between sellers and buyers are individuals.

In the B2B applications, the two sides both buyer and seller are company organization. This application uses electronic transactions with distributors, resellers, suppliers, customers and business associates to another. In application of B2B, organizations can conduct transactions in the expansion of the scope of the supply chain (value chain) with their business associates. According to Turban (2010), models of B2B applications are: (1) sell-side corporate marketplace; (2) The corporate buy-side marketplace; (3) public exchanges.

In the B2C application, sellers are organization and buyers are individual. Examples of the B2C models in this application is Electronic Storefronts and Electronic Malls.

From the application model both Business-to-Business and Business-to-Consumer can be seen that basically in the transaction model is similar to that done in the era of the old economy. That gave the difference here is the e-marketing make it easy to buy from anywhere, anytime for 24 hours a day and 7 days a week. Use of E-Marketing (24/7) because it has been put on the Internet facility. Then, more of the e-marketing also provide a large selection of goods and services, including items that are unique items, and in a fairly cheap price than if it bought in a store.

Online Sales and Online Purchase Transactions Basically, the sale and purchase transactions in e-commerce is almost the same with that done trandisional. What distinguishes here are ordering and payments made online.

The following stages are there to make online sales and online purchases:

1. Online order – online order using the Order Form provided by sellers electronically. Seller provides a product list or catalog (Product catalog) sold which is usually accompanied by a description of the complete product with a picture of the product. At the time of filling out the order form, the buyer / customer asked for fill out the information for payment purposes (billing) and shipping (shipping). After charging order form is done, there is further provided the stage for the confirmation of orders up to the selection method of payment and the delivery of goods;

2. confirmation of payment – if the buyer/the customer has to make a payment, the seller will confirm the payment which have been accepted;
3. Check the availability of goods – in general, the seller already has product ready for sale. But in anticipation of the lack of supplies, should the seller check the availability of existing inventory;
4. Management of the delivery of goods – if available, the product is shipped to the buyer. In e-commerce transactions, products sold can in physical or digital form. If the products in physical form and the product is available, then will be packing and shipping. If the products in digital form, eg software (software), it is necessary to anticipate, if the software is already has a new version or currently under revision;
5. Returns – there is a possibility that goods delivered to customers is not in accordance with customer expectations. In this case the seller must be members of a guarantee, that if the goods are delivered to customers is not appropriate, then goods can be returned to the seller.

Advances in technology will help people in life, in do the work, and others. To conduct business in this case activities for Small and Medium Enterprises, the application of technology that will be used with the Internet in an E-marketing activity. E-marketing is the application of the technology also has advantages and limitations.

Advantages of e-marketing for the company are: (1) expand the marketing network both in national even international; (2) shorten or even eliminate marketing distribution channels; (3) assist small-scale enterprises to compete with large-scale enterprises.

The advantages of e-marketing for customers are: (1) provide an opportunity for customers to choose the desired product; (2) provide detailed information on the products quickly; (3) allow customers to interact in a community digitally and can exchange ideas.

The advantages of e-marketing for the community are: (1) make it possible for individuals to work at home, so as to reduce travel costs, reduce traffic congestion, reduce fuel consumption and reduce pollution; (2) gives the possibility to be able to buy goods at a cheaper price; (3) provides an opportunity for people in rural areas can also enjoy the products and services not previously enjoy.

Limitations of E-marketing from the technology include: (1) the absence of a standard standard of quality, safety and reliability; (2) the problem of bandwidth; (3) requires a Web server, especially to deal with network problems. While the limitations of the non-technology including: (1) absence of government regulations concerning commercial transactions through e-marketing; (2) the perception that e-marketing is unsafe and expensive; (3) many buyers and sellers are waiting for e-marketing until the situation becomes stable for them to participate.

CONCLUSION

In the current era of globalization is often referred to as the digital age, the application Information technology has become a necessity for businesses, do not miss also for businesses in the Small and Medium Enterprises. Application of Information Technology needed is the development of web-based business application model for SMEs in order to increase competitive advantage.

Application of Information Technology in the form of E-marketing, can be a consideration for businesses. Because in e-marketing not just transaction inside, the company also can exchange information through the Internet.

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