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The principal objective of the journal is to provide a medium for disseminating findings of study and research addressing issues, practices and developments in Management. Scholars and practitioners are invited to publish their work in the field of Management taking either a positivistic or a non-positivistic approach. Thereby, the journal promotes free and unbiased opinion, networking and sharing of experiences on matters of importance to organizations and society.

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Editorial

The NSBM Journal of Management (NSBMJM) fulfils an obligation towards academia, industry and policy makers. In today's corporate and business environment of diversity, complexity and change, the dissemination of new knowledge merits top priority in meeting new challenges and making use of fresh opportunities. It is not only a global need but also a specific responsibility of Sri Lanka as a developing island nation with an ever evolving knowledge economy geared to face global challenges.

NSBMJM provides a medium for disseminating the findings of study and research on issues, practices and developments in Management among a wide spectrum of stakeholders. Open to contributions from both positivistic and non-positivistic research traditions, the journal invites theoretical studies, empirical investigations, action-based (case study type) research and book reviews for publication. Each contribution goes through an intensive review process prior to acceptance for publication.

This maiden issue of NSBMJM contains five empirical papers and a review paper covering a range of themes. They will be of interest to both local and international readership.

The first paper by J A S K Jayakody deals with leadership. It explores how followers construct charisma, a theme closely associated with the populace of the South Asian region with its legacy of charismatic leaders in personal, organizational and societal development. The writer follows an integrative approach to constructing charisma as a constellation of meanings consisting of leader prototypes, leader archetypes, leader extraordinariness and leader group prototypes developed concurrently through multiple cognitive processes.

Being a developing country, Sri Lanka needs an expanding entrepreneurial class. The second paper by Randi Kailashini Thiranagama, which is a qualitative study of local local entrepreneurship in the SME sector, identifies the personal and environmental factors that contribute to engineers and accountants emerging as entrepreneurs. Entrepreneurial engineers tend to start ventures largely in the field of technology whereas the entrepreneurial endeavours of accountants belong to other disciplines. The practical implications of the study are of relevance to policy makers in promoting the spirit of entrepreneurship in Sri Lanka.

Today's global environment is prone to rising levels of natural disasters with South Asia including Sri Lanka bearing even more than its due share in the recent past. The third paper, a study of disaster management and resilience by Nadira Ahangama and Raj Prasanna is of topical significance. It covers a review of the literature on disaster management and resilience in the global and local contexts and proceeds to identify the theoretical and empirical research gaps in the field. The writers highlight disaster resilience in a multi-stakeholder environment and frame a 'bounce forward' concept as important features of future research.

The fourth paper looks at Management Information Systems (MASs) and strategy. The writers Dinushi Wijesinghe and Dileepa Samudrage examine how technically oriented top managers use MASs for organizational strategy implementation in the Sri Lankan manufacturing sector. They argue that technically oriented top managers use MASs more interactively than diagnostically and prefer the use of innovative to traditional MAS information. Further, they consider that top managers support the implementation of prospector strategy owing to their innovativeness.

Corporate governance is a research theme of growing importance in this part of the world in particular. The fifth paper by G S Mapitiya, A R Ajward and Samanthi Senaratne examines the relationship between ownership concentration and the degree of compliance with corporate governance best practices of public listed companies in Sri Lanka. A highlight of the paper is developing a Corporate Governance Index (CGI). The degree of compliance with corporate governance best practices pertaining to board characteristics is significantly lower in closely held companies than in widely held companies. The findings are of practical relevance to policy makers in the region and in Sri Lanka.

The concluding paper, a research note by Nilakshi W K Galahitiyawe and Ghazali Musa, takes a totally different stand from the other papers. It is of value for researchers interested in measuring service quality performance. Noting the inadequacies of the SERQUAL scale, the writers propose INDSERV as an alternative to measure B2B (business to business) service quality performance. They validate the INDSERV scale in the outsourcing function of the hotel industry in Sri Lanka. It shows the need for a field survey to uncover the unique factors that measure industrial service quality in Sri Lanka as it may be a reason for the contextual mismatch of a borrowed scale.

The Editorial Board of NSBMJM wishes to place on record its appreciation of the laudable move by the Board of Management of NSBM to commence an academic journal of this nature. It is a natural but important phase of the development of this national institute of higher learning. Difficult challenges lie ahead in continuing an academic journal with regularity and quality, but they have to be met as the prosperity of our society is dependent on new knowledge generation, dissemination and their application.

Prof. Mangala Fonseka
Editor

Charisma as a Follower-centric, Cognitive-affective Phenomenon: Initial Qualitative Evidence for the Cognitive Dimension

J A S K Jayakody

Abstract

Taking the follower-centric approach to charismatic leadership, this paper explores how followers construct charisma. Based on in-depth data from followers representing members of the Senior Management Team and a task force of an Enterprise Resource Planning (ERP) implementation project of two Sri Lankan business operations, this paper illustrates that followers construct charisma through multiple cognitive processes concurrently. The paper concludes that charisma is a constellation of meanings consisting of leader prototypes, leader archetypes, leader extraordinariness and perhaps even leader group prototypes. Consequently, this paper contributes to the follower-centric theory by showing the need and the possibility of taking an integrative approach to charisma.

Keywords: charisma, cognitive-oriented paradigm, follower-centric approach, leadership, qualitative study.

Introduction

The follower-centric approach asserts that ‘...subordinates’ perceptions of their leaders are a central determinant of subordinates’ reaction to those leaders’ (van Quaquebeke, van Knippenberg & Brodbeck 2011, p. 368) and advocates that researchers explore the cognition of the follower instead of the leader (Haslam et al.2001) so as to understand the dynamics of charisma. Following this assertion, leadership theorists have borrowed heavily from cognitive psychology-a trend that Lord and Emrich (2001) have termed the cognitive revolution in leadership research and van Quaquebeke et al. (2011) have recently called ‘the cognitive oriented paradigm of follower-centric leadership’. In addition to this cognitive

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oriented paradigm, there are also attempts to explain charisma as an emotional phenomenon (Ladkin 2006, 2008, Wasielewski 1985).

At present, there are several theories in this approach and each theory explains charisma through a selected cognitive or affective process. For instance, while the leader categorization theory of leadership suggests that charisma is attributed when the leader is perceived as a prototypical leader (Lord, Foti & De Vader 1984, Lord & Emrich 2001, Ensari & Murphy 2003, Dickson, Resick & Hanges 2006, van Quaquebeke et al. 2011), the social identity theory of leadership states that charisma is attributed to the leader due to his/her group prototypicality (Hogg 2001, van Knippenberg & van Knippenberg 2005, van Knippenberg 2011, Platow et al. 2006). On the other hand, the romance of leadership theory takes a completely different stance and argues that performance cues (Meindl 1995, Ensari & Murphy 2003) are the basis of charismatic attribution. The aesthetic approach to charisma assumes that followers' aesthetic encounter with the leader results in charismatic attribution (Ladkin 2008). Finally, drawing from Jung (1981), another group of researchers (Steyrer 1998, Kociatkiewicz & Kostera 2012, Takala et al. 2012) argues that charisma originates in leader archetypicality.

Contrary to each theory's attempt to explain the follower-centeredness of charisma through a selected cognitive or affective process, the empirical evidence to date indicates a more complex interplay between leader group prototypes and performance cues (Haslam et al. 2001), and leader group prototypes and leader prototypes (Hais, Hogg & Duck 1997). Jayakody (2008), having noted this contradiction between theory and empirical evidence, postulates that followers attribute charisma through two or more cognitive and affective process concurrently. Subsequently, he conceptualizes charisma as a follower-centric, cognitive-affective construct consisting of three cognitive components and two affective components. He describes three cognitive components as 'Leader Extraordinariness', 'Leader Archetypicality' and 'Leader Group Prototypicality', while 'Reverence with Awe' and 'Love with Enthusiasm' are proposed as constituent affective dimensions. In support of his conceptualization, Jayakody (2008) notes that Weber considers charisma as a follower-centric, multi-dimensional phenomenon, citing Weber's reference to subtypes of charisma, its emotionality and his treatment of extraordinariness as an attributional phenomenon.

Accordingly, taking the social constructionist approach, this paper proposes to provide some initial qualitative evidence in support of charisma as a constellation of meanings for a given follower, and thereby conceptualize charisma as a constellation of leader extraordinariness, leader group prototypicality, leader prototypicality and leader archetypicality. The paper employs the recognition-based information processing perspective and Weber's theory of

charisma as the theoretical basis for this integration in addition to the social constructionist approach. It should be noted that the present paper excludes the affective dimension of charisma as well as the role of performance cues simply due to lack of space.

Accordingly, this study illustrates the need and the possibility of integrating different attribution processes suggested in the follower-centric approach to study charismatic dynamics and contributes to the existing literature on charismatic leadership in several ways. First, this study contributes to the research that treats followership as a research area in its own right (Uhi-Bien et al. 2014) by addressing what Tee, Paulsen and Ashkanasy (2013) called ‘omission of follower in leadership studies’. Second, the study brings leader prototypicality, leader group prototypicality, and leader archetypicality and leader extraordinariness into a single framework with the use of recognition-based information processing and Weber’s theory of charisma, and provides evidence for the attribution of charisma through several concurrent processes (Hanges, Loard & Dickson 2000). Consequently, this study establishes a sound theoretical basis for the cognitive dimension of charisma, thereby strengthening the follower-centric approach to charisma. Finally, the paper also provides initial qualitative empirical evidence for this new conceptualization, thus addressing the long-felt need of exploring the follower-centric approach in the day-to-day organizational context through qualitative methods (Yorges, Weiss & Strickland 1999).

The rest of the paper begins with a review of the literature outlining recognition and inference-based information processing -the underpinnings of the cognitive dimension of charisma. Then, the author discusses leader prototypes, leader group prototypes, leader archetypes and leader extraordinariness emphasizing the possibility of developing an integrative framework of charisma. This is followed by a section on the methodology of the empirical study which takes the form of two case studies. The fourth section presents the results followed by a discussion of the findings. The paper concludes with a brief discussion of implications, limitations and further research.

Literature Review

Information Processing and Follower-Centric Theories

The cognitive-oriented paradigm dates back to the early 1980s. During the last three decades, at least three major theories evolved, namely, the social identity theory of leadership (Hogg 2001), the leader categorization theory (Lord et al. 1984) along with the implicit leadership theory (Eden & Leviatan 1973), and the romance of leadership (Meindl 1995). The notion of

archetypal leader (Steyrer 1998) could also be incorporated in this list although it does not stand alongside the other theories in terms of theoretical sophistication and empirical support.

While the social identity theory of leadership and the leader categorization theory draw their basic premises from what theorists call recognition-based information processing (Holmberg & Akerblom 2006), inference-based information processing is the foundation of the romance of leadership theory (Ensary & Murphy 2003). Furthermore, recognition-based information processing is the underpinning of leader archetypes as well as leader extraordinariness.

The leadership theories that draw on recognition-based information processing postulate that followers attribute charisma to leaders in terms of the match between perceived traits and/or behaviors of their leaders and the leader/group prototypes. Accordingly, as discussed below, this process of matching is what is central in charismatic attribution, be it based on leader prototypes, leader group prototypes, leader archetypes or leader extraordinariness.

Leader Prototypes and Leader Group Prototypes

Prototypes are defined as ‘...fuzzy sets that capture the features of a particular category of objects, often in the form of representations of exemplary objects...or ideal types’ (Hogg & Terry 2000, p. 123). They are cognitive structures and are stored in the individual’s memory. In other words, prototypes represent the normative expectations of people about the features of a particular category of objects. For instance, followers hold fuzzy sets of features of ideal leaders which represent followers’ normative expectations of a leader. Four characteristics of prototypes are important in the context of the present study. First, when people interact with other objects these other objects are likely to activate the relevant prototypes. Second, individuals use prototypes to interpret objects with which they interact. Third, prototypes constantly evolve as individuals interact with other individuals, objects and events, and thus the normative expectations about individuals, objects and events evolve constantly. Finally, prototypes do not comprise all the characteristics of particular objects but only the most salient characteristics (van Knippenberg & van Knippenberg 2005).

In the context of the above discussion, the leader categorization theory and the social identity theory of leadership which ascribe a central role to prototypes view the leader as one who matches the prototypes, either leader prototypes in the case of the leader categorization theory or group prototypes in the case of the social identity theory of leadership. Further, both theories accept that leaders are likely to activate prototypes that followers when they interact with the leader (for group prototypicality, see van Knippenberg and van Knippenberg

[2005], Giessner, van Knippenberg and Sleebos [2009], for leader prototypicality, see van Quaquebeke et al. [2011], Keller [1999]). Both theories also suggest that the leader who is perceived to be most prototypical, i.e., who is perceived to match their ideal, be it the leader or the group member in the case of leader prototypicality and leader group prototypicality respectively, as being effective and that the followers are likely to attribute charisma to this most prototypical person (van Knippenberg 2011). Finally, both theories posit that a leader does not have to match all attributes of the category; instead he has to match only the most salient attributes of the category (i.e., leader or group category).

In spite of these similarities between these two theories, they also differ from each other in some significant ways. The first and the most important difference is the type of prototypes they refer to, which is leader group prototypes in the social identity theory of leadership and leader prototypes in the leader categorization theory. In the case of leader group prototypes, the prototype refers to the *social group* to which the leader and follower both belong, and in the case of leader prototypes, the prototype refers to *leaders*. Consequently, leader group prototypes embrace the traits and behaviours that followers expect from their (ideal) group members, while leader prototypes embrace the traits and behaviours that followers expect from their (ideal) leaders. The second difference is that leader prototypicality is believed to be more contextual than leader group prototypicality (Giessner et al. 2009, Dickson et al. 2006, Nye & Forsyth 1991) because the former is said to vary across persons (Giessner et al. 2009, Nye & Forsyth 1991), cultures (Dickson et al. 2006, Giessner et al. 2009); and hierarchical levels and target genders (Dickson et al. 2006), although some elements of prototypicality are universally held (Dickson et al. 2006). However, the leader group prototypes are also subject to the influence of salient out-groups at a given point of time (Hogg & Terry 2000).

Leader Archetypes

In contrast to the above theories, Steyrer (1998) argues that the root of charisma is archetypes and not prototypes, borrowing from Neuberger's thesis that behind the generic category of leadership there is another more basic dimension called archetypes. Researchers who use archetypes to explain charisma argue that followers are likely to attribute charisma, when the leader is perceived to match their archetypal leader.

Archetypes represent the more unconscious preferences of human beings that are innate, universal and reveal characteristics of humans as a species (Abramson 2007). Furthermore, they are said to develop as a result of human evolution and supersede cultural influences; thus, all human beings across cultures are believed to share the same archetypes (Abramson 2007).

However, archetypes are embodied in and communicated through mythologies (Jung 1981), and thus a particular archetype, while having a more universal character, may also have culturally specific features. For instance, the mother, an archetype, exists across cultures, and the disposition towards the mother may be similar in all cultures, i.e., faith in the mother's tenderness. However, expected traits and behaviors of the mother may vary across cultures. For instance, in Europe, a 'loving and terrible' mother, as Jung (1981) states, may exist in the form of Virgin Mary while in India the same may take the form of Kali whose traits and behaviors differ from those of Virgin Mary.

According to Olsson (2000), Steyrer suggests that charisma can be 'operationalized' in terms of the archetypes such as hero, saviour, father and king. In addition to these four archetypes, Olsson (2000), arguing the need for using female archetypes to study business women, suggests the Xana warrior princess as an archetypical woman manager. Recently, Takala et al. (2012) used archetypes to analyze Obama. The literature however has paid comparatively scant attention to leader archetypes.

As leader prototypes and leader group prototypes are similar in certain ways and are different in some other ways from each other, leader archetypes can also be considered similar to prototypes in several important ways and different in a few other ways. First, leader archetypes are similar to both leader prototypes and leader group prototypes since all three personify the normative expectations of followers. Second, leader archetypes, similar to the other two, are likely to be activated when followers interact with their leaders; and once they become active, followers use them to perceive leaders. Third, like leader prototypes and leader group prototypes, charisma is attributed to leaders based on the similarity between leader archetypes and perceived behaviours and traits of the leader.

However, leader archetypes are different from both leader prototypes and leader group prototypes in several ways. First, archetypes, compared to prototypes, are more unconscious, and thus are likely to be more dormant than prototypes. Second, unlike both leader prototypes and leader group prototypes, leader archetypes possess very specific attributes and are limited in number. Finally, attributes and behaviours considered as archetypical are comparatively more culturally rooted than those embedded in leader prototypes and leader group prototypes.

Due to the fact that archetypes are more unconscious than prototypes, followers are likely to use archetypes less frequently than they use prototypes, be it leader or group, to attribute-charisma. Further, unlike leader prototypes, but similar to leader group prototypes which are more likely to be evoked in the context of salient out-groups, a particular archetypical leader

is likely to be active only in a specific context. For instance, a saviour-like leader may emerge in a crisis more than in other contexts (Takala et al. 2012). Also, just as traits and behaviors embedded in group prototypes are less likely to vary among the followers of a given group, traits and behaviours of the archetypical leader are less likely to vary among the followers in a given culture. In contrast to both leader group prototypes and leader archetypes, different followers of the same group or the same culture may possess different leader prototypes.

Leader Extraordinariness

Among the four dimensions that the present paper conceptualizes as dimensions of charisma, leader extraordinariness is not the subject of much discussion in the follower-centric approach except to treat charisma, i.e., extraordinariness as an aspect of implicit leadership. Therefore, the follower-centric approach can be said to drop leader extraordinariness—the most celebrated aspect of charisma in both Weber’s writings and in the leader-centric approach. In fact, the concept of leader extraordinariness cannot be dropped from charisma since extraordinariness is a perceptual phenomenon in Weber’s work. Weber states that followers attribute charisma to leaders when leaders are ‘...considered extraordinary and treated as endowed with supernatural, superhuman, or at least specifically exceptional powers and qualities...’ (Weber 1947, p. 358). According to Jayakody (2008), Weber’s use of terms such as ‘exceptional’, ‘supernatural’ and ‘superhuman’ should be taken to mean ‘leader’s apartness from the ordinary’ and uses the term ‘extraordinariness’ to signify ‘the leader’s apartness from the ordinary’. Furthermore, he suggests that ‘exceptional’, ‘supernatural’ and ‘superhuman’ imply different levels of extraordinariness.

However, Jayakody’s (2008) interpretation of ‘extraordinariness’ does not do sufficient justice to Weber’s use of the same term since charisma means not just an apartness from the ordinary but a ‘beyondness’ from the ordinary. Thus charisma, based on Weber, can be said to be attributed when the leader is perceived to be transcendental, i.e., beyond being an ordinary human. This interpretation of Weber’s work is supported by Williams (1988) when he states that ‘supernatural’ implies a person who is beyond a human being or more correctly beyond a prototypical human being. Accordingly, leaders can be expected to be attributed with charisma when they exceed followers’ normative expectations of leader.

Weber’s own writing supports Jayakody’s (2008) interpretation of charisma when Weber states that genuine charisma is not a part of normative order (Greenfeld 1985). Conger and his colleagues too support this stance when they state that charisma is attributed when leaders are perceived to ‘...use unconventional and counter cultural strategies and plans of action’

(Conger, Kanungo & Menon 2000, p. 751), and to question the status quo, long held values and expectations (Conger et al. 2000).

Recognition-based Information Processing as a Theoretical Underpinnings

To summarize the above literature, in the case of charismatic attribution through leader prototypes, group prototypes and archetypes, charisma is attributed to a leader when the leader's traits and behaviours match followers' leader prototypes, group prototypes or an archetype respectively, while in the case of leader extraordinariness it is the deviation of leader traits and behaviors from the followers' normative expectations of human beings (prototypical human beings) that provide the basis for charismatic attribution to that leader. In spite of this apparent contradiction between these two approaches, the underpinning mechanism of both attribution processes is one and the same, that is, recognition-based information processing. In both approaches, followers compare the perceived leader traits and behaviours of a leader with their normative expectations about the leader, i.e., prototypes/archetypes. Accordingly, it can be concluded that leader prototypes, leader group prototypes, leader archetypes and leader extraordinariness can be grouped together because they all share the same underpinning-recognition-based information processing. Since the foundation of all these processes of charismatic attribution is one and the same, all processes can be expected to take place concurrently.

Although there is no evidence to support the argument that followers attribute charisma to alternative attribution processes operating concurrently a few studies attribute it to the interplay among several attribution processes. For instance, the empirical evidence indicates that both leader prototypicality and leader extraordinariness mute when the leader is group prototypical. First, followers who identify with the group are found to endorse leaders based on the group prototypicality of leaders whereas followers are likely to endorse leaders based on leader prototypes when they do not identify themselves with the group (Hais et al. 1997, Platow & van Knippenberg 2001). Second, when a leader becomes leader group prototypical, the effect of self-sacrifice, a determinant of charisma related to extraordinariness, is found to become weak (van Knippenberg & van Knippenberg 2005).

Study Design

This study takes the social constructionist approach to charisma, and thus assumes that a) charisma is constructed through interactions among social agents, b) multiple interpretations of charisma exist, c) the charisma of a leader is produced and reproduced on an ongoing

basis, and finally d) the act of communication, including interviews the researcher had with research participants are the medium through which the research participants construct and negotiate the charisma of their leader.

The social constructionist approach permits the researcher to align his epistemological stance with the ontological stance of the follower-centric theory. It should be noted that all or most follower-centric researchers adopt the realist ontology in their empirical studies in spite of charisma being treated as ‘constructed’ by the beholders. According to Fairhurst and Grant (2010), the social constructionist approach endorses the attributional nature of charisma and is likely to accept leadership, i.e., charisma lies in the eye of the beholder, and thus matches the fundamental assumptions of the follower-centric theory. Furthermore, the social constructionist approach also accommodates the present study’s bent towards the cognitive process, which Fairhurst and Grant (2010) treat as constructions of social reality.

Case Sites

The researcher selected two cases: a Project Team engaged in the implementation of an ERP system in a multinational company operating in Sri Lanka (which will be called SIN, hereafter) comprising six followers and a Senior Management Team of a telecommunication firm (known as MOB, hereafter) comprising again six followers. The Project Leader and the CEO who had turned around the business in each case are considered leaders in SIN and MOB respectively. In addition to taking each firm as a case, each dyad of leader and follower is also treated as a case since this paper treats charisma as a dyadic relationship between the individual follower and his/her leader.

While both case sites are characterized by change, MOB is also characterized by crisis. Both crisis and change are considered fertile grounds for the emergence of charisma (Conger 1999, Ladkin 2006). Furthermore, the leaders studied are socially close to the followers (Shamir 1995, Yagil, 1998). Shamir (1995), based on an exploratory content analysis of interviews, argues that the attribution of charisma to close leaders is based on recognition-based information processing; Yagil (1998) too supports Shamir’s position empirically. Accordingly, these two case sites can be considered ‘best example cases’ (Morse 2007, p. 234) and are in line with the qualitative research tradition that suggests selecting the best example case in which the phenomenon emerges ‘more quickly and cleanly’.

The Project Director of SIN, Samaravithana joined the firm in 1986 after graduating from a Sri Lankan university and at the time of interviews he was serving as Director IT reporting

to the CEO. Samaravithana was recruited solely to set up the IT Division of the firm and is considered the person behind the ICT capability of the firm. All but one member of the Core Project Team were two or three levels below the CEO; the remaining follower, similar to Samaravithana, was a director reporting to the CEO. While three followers had a line relationship with Samaravithana, he had also been known to the other followers for several years.

A foreign company and a local partner established MOB in 1993 and it is relatively small. The local partner who was the leading fixed telephone operator in the country for decades became the sole owner of MOB in 2002. MOB had reported losses for years and Mahendra, who is considered the leader in the present study, joined MOB in 2005 as CEO and turned it around in less than three years. Mahendra is an engineer by profession and holds an MBA from the USA and counts many years of experience in the mobile phone industry, both locally and internationally. Except for two followers who had worked with him years before with another mobile phone operator in Sri Lanka, no one had heard about Mahendra before he joined MOB.

Interview Process

Following Stake (2005, p. 450), who states that disciplinary expectations guide the field work in multiple case studies, the researcher interviewed all followers in person with an interview guide based on the attribution processes discussed above. Interviews were held towards the end of Mahendra's fourth year at MOB, while the project of SIN had entered its final phase at the time of the interviews. All six members of the senior management team of MOB, and six of the eight members of the project team of SIN were interviewed. The interviews lasted approximately forty five minutes and were audio recorded and transcribed verbatim. All interviews (except one where the interviewee opted for Sinhala, his mother tongue) were conducted in English. All including the one who opted for Sinhala were good in English as a second language and English is the language of communication in both firms.

Data Analysis Process

Grounded theory method of data analysis was used as it offers '...practical advice of the nuts and bolts...' of analyzing data (Dey 2007, p.185). The researcher initially coded 'fragments' of an interview with a broader theoretical understanding of leadership rather than a theoretical formulation of charisma as advanced in the present paper. Then, following Kelle (2007, p. 193), the researcher reflected upon these codes and their representative fragments of

interviews with the help of the present theoretical formulation of charisma. Accordingly, as suggested in the constructivist grounded theory, the theory emerged or was supported in the context of the present study through the researcher's close engagement in the interpretation of data rather than his 'close engagement with data' (Dey, 2007). Accordingly, the theoretical analysis of the present study can be considered an interpretative portrayal of reality (Charmaz 2005, p. 510) grounded in the researcher's theoretical formulation of the research problem.

Results and Discussion

Leader Prototypicality

The interviews reveal that five followers at MOB and three followers at SIN attribute charisma to their leader in terms of leader prototypicality. Among the attributes, those known to be universally endorsed as leader attributes such as 'integrity', 'honesty' and 'vision' are found in the leader prototypes shared by these followers. For instance, MOBL1R3 states that:

... he should have a vision, he should have, you know, all the ingredients, you know, to encourage and to lead the people towards the vision. And he should be, you know...his integrity; I consider the integrity and honesty as the main...I think he is a very good CEO,... I don't see any issue...

Integrity and vision are identified in the GLOBE study as attributes of charismatic/value based leadership which are endorsed universally (Gupta et al. 2002). While the followers consider these attributes as attributes of 'good' (i.e., charismatic) leaders, they also see these attributes in their leader.

However, there are other attributes that these followers see in their leader which they do not consider as aspects of their prototypical leader, though they are considered as attributes of charismatic leader in the literature. For instance, while several followers in MOB state that their leader is inspirational, none of them considers inspiration as an attribute of their prototypical leader, though it is considered as an attribute of charismatic/value based leadership in the literature (Gupta et al. 2002). Consequently, inspirational behaviour that Mahendra is perceived to display cannot be expected to contribute to his charisma as it is not a part of his followers' leader prototypes in spite of it being considered as an attribute of charisma.

The followers of the present study are also found to possess culturally specific leader prototypes. An example of this is a somewhat authoritarian leader prototype attribute identified

in the talk of some followers. MOBL1R3 says that ‘...sometimes he is too nice to people, that’s the issue...’ Here, MOBL1R3 perceives Mahendra as a person who is sensitive towards people; however, he perceives this as an ‘issue.’ The phrase ‘too nice’ implies that MOBL1R3 expects to see the leader as a person who should be ‘less sensitive towards others’ feelings’. SINS1R4 pronounced this expectation strongly in his statement that ‘...the director I see is a rough guy... A person to whom you have to give what he asks for and who punishes when results are not there. But he is not like that’. If SINS1R4’s reference to ‘director’ is interpreted as a reference to a leader, this can be taken to imply that SINS1R4 considers ‘being strong’ to be a leader prototypical attribute. Further, it can be concluded from MOBLR3’s ‘too nice’ and SINS1R4’s ‘But he is not like that’ that neither is likely to attribute charisma to their respective leaders because the latter do not measure up to their expectations of toughness. This expectation that the leader has to be ‘strong’ or ‘less sensitive towards others’ feelings’ can be taken as a cultural phenomenon as previous studies indicate that Sri Lankan society is hierarchical (Nanayakkara 1992, Liyanage 1996) and respect for authority is a Sri Lankan cultural attribute (Nanayakkara 1992). Therefore, followers in Sri Lanka are said to expect their leaders to be ‘...autocratic, task-oriented, paternalistic...’ (Upasena 1992, p. 177). These conclusions are in line with Den Hartog et al. (1999) and Hetland and Sandal (2003), who state that sensitivity might be considered as an aspect of feeble leadership in cultures which favour an authoritarian leadership style. Consequently, both of these leaders might be considered less charismatic in terms of that aspect and these findings can be considered as evidence of the impact of culture on prototype-based attribution of charisma.

Finally, the immediate task environment of the leader is also found to influence leader prototypes. For instance, SINL2R6 states ‘...if you take it in this context, now it has...he is one of the ideal people to handle this situation. He has taken it right...’ while MOBL1R6 states ‘...I think he is very experienced; he had credential, he had qualification. He had everything right to sit as a CEO at MOB.’ MOBL1R1 states, ‘I like to see this...it is there already. As far as I am concerned, there is nothing to look for beyond this. He has more capacity even to run a bigger organization than this.’ All of these followers indicate that their leader is assessed against the ideal leader in the given task environment. While ‘everything’, ‘nothing to look for beyond’ and ‘ideal leader’ indicate use of the prototypical leader, ‘if you take it in this context’, ‘sit as a CEO at MOB’ and ‘run a bigger organization than this’ imply they form this prototypical leader in relation to the CEO’s task environment and finally ‘he had everything’, ‘it is there already’ and ‘he has more capacity’ indicate that they perceive their leader to match their prototypical leader which makes Mahendra a charismatic leader in their eyes.

The preceding discussion reveals that some of the attributes of leader prototypes are universal, others are culturally specific, and still others are specific to the immediate task environment. Consequently, while confirming the previous empirical evidence that leader prototypes embrace both universally and culturally salient leader attributes (Holmberg & Akerbolm 2006), this study points to the fact that prototypical charisma is also linked to the immediate task environment. Additionally, the interviews also indicate that prototypes are used to classify a leader not only as a proper (positive -beyond the appropriate level) but also as an improper (negative -below the appropriate level) leader. Implications of the culture or the immediate task environment on prototypes or use of these prototypes as criteria to classify the leader as proper or improper have not been discussed in the current literature.

Leader Archetypicality

The analysis of the interviews also confirms the archetypical nature of charisma though the archetypes associated with the charisma of these leaders are different from each other. While the charisma attributed to Samaravithana by some of his followers can be considered paternalistic, none of Mahindra's followers perceived him as a paternalistic charismatic leader. Instead, Mahendra is seen as a missionary charismatic leader or a saviour by some of his followers. Paternalistic charisma refers to leaders who provide care and protection in exchange for submissive and dependent followership, saviour (Steyrer 1998) or saviour-like missionary charisma (Takala et al. 2012). That refers to charismatic leaders who transform or change social systems to a better one by offering a vision of a better future, strategies to realize it and mobilize followers towards that better future (Steyrer 1998, Takala et al. 2012).

While Samaravithana is perceived as a paternalistic charismatic leader, it seems that followers are unable to strongly or clearly articulate and tend to question their own perception. For instance, SINL2R6, who identified that Samaravithana possesses a fatherly image, seems uncertain about whether or not to consider Samaravithana as similar to his own parents.

...Let me...he is a father figure. He doesn't...OK...even when we go and have a drink...that is a different story. He is like a friend. But, he is a fatherly figure. He always comes and advises you, what to do with your family, sometimes he behaves that way also. But my parents...that is in a completely different way. I don't think...well I don't know it is. Because of my parents that I feel that way is quite possible...but I don't think...a lot of people can't come up to my parents' position. They are completely different people.... Mr. Samaravithana is younger than my parents. I don't think he can come up to their position...I don't... when he matures, he might come close to that... he is a very strong

leader. He has his own ideas and he tries to implement them. We have to work for it. There are certain times that we were being pushed down. Mainly it was for the best. He was not selfish or anything like that... (SINL2R6)

Even though there is some hesitancy indicated in the above statement, it contains some elements of paternalistic charisma. Paternalistic charisma is characterized by both softer values such as caring as well as hard values such as demanding and domination (Takala et al. 2012) and both aspects are embodied in the above quote. For instance, he states that Samaravithana advises even about family matters, while also saying that ‘...he has his own ideas and he tries to implement them. We have to work for it. There are certain times that we were being pushed down.’ Accordingly, SINL2R6 appears to perceive that Samaravithana is concerned about the followers’ family matters (soft values); on the other hand, he also perceives that followers have no option but to work for Samaravithana’s ideas (hard values). Furthermore, the same quote shows that not only does the follower see the leader as a father but also attributes charisma to him as this follower says that ‘P... when he matures, he might come close to that... he is a very strong leader’. Hence, Samaravithana can be considered to be a paternalistic charismatic leader in the eyes of SINL2R6.

Although little has been written on contextual factors that support the emergence of paternalistic charisma, Takala et al. (2012) suggest that crisis incites followers to attribute paternalistic charisma. According to them, people can be expected to look for protection in times of crisis, and thus crises can be considered fertile ground for the emergence of paternalistic charisma since an element of protection is associated with paternalistic charisma. If this supposition is taken as valid, the charisma of Mahendra rather than of Samaravithana should be characterized by paternalism since MOB, and not SIN, is the firm that had gone through a period of crisis. Therefore, one might speculate whether this is to be taken as evidence to dispute Takala et al.’s argument; alternatively, it might be an indication of contextual influence. Some insight into this contradiction between the present findings and the literature on charisma can be gained when Sri Lankan culture is taken into account. For instance, previous studies have indicated that followers expect their leaders to be paternalistic (Upasena 1992). Consequently, the paternalistic charisma of Samaravithana might be a reflection of a general tendency of the Sri Lankan follower.

The literature also suggests that a crisis demands a leader to present a vision of a better future and strategies to realize it, which are the characteristics associated with saviour-like missionary charisma (Steyrer 1998, Takala et al. 2012). An archetype based on this requirement may have overshadowed the paternalistic aspects in the followers’ attribution

of charisma to Mahendra. This conclusion seems valid since the link between crisis and Mahendra's missionary charisma emerged plainly in the interviews.

... We were waiting for a CEO; he was very welcome...we were lagging behind market leaders by a greater distance. We were making losses. But we had the commitment. We have commitment...But, for the time being we had a setback. So, at that time we needed a CEO to rally around and really to strategize, re-strategize... (MOBL1R5)

...So, I thought we were a bit of a rudderless ship. We were wondering about... we had the ship, but did not have a captain. So, the ship can't go anywhere without the captain. So, I think he gave that captaincy or the pilot ship... (MOBL1R4)

The element of salvation attributed to Mahendra is not simply limited to overt recognition of Mahendra as a saviour. It is implied in the above interview excerpts. It also rests, as Steyrer (1998) suggested, in vision and transformation which are embedded in the strategies that Mahendra offered to deal with the crisis. For instance, a change in the pricing structure and the launch of a new product, both of which his followers identify as 'revolutionary' moves, support the fact that his vision and transformation are embedded in the strategies that he offered to overcome the crisis.

... the first thing that Mahendra did was to change that equation post to pre. Actually post-paid is difficult to manage. So, we got into prepaid. When we look at that time, all the others were 80% prepaid, 20% post-paid and some companies, I think 90%, 95% prepaid. We were actually 90% post-paid and 10% prepaid. Change of that equation, that's the first thing that Mahendra did. We launched a product called Seven Friends, which I think transformed the country's entire prepaid market... (MOBL1R3)

It should be noted that some literature suggests that followers tend to attribute successful business turnarounds to the incumbent CEO (Haslam et al. 2001), and such attribution is more likely to be inference-based regardless of the leader's contribution to success; this is the underpinning of the romance of leadership theory. Accordingly, it is important to separate the recognition-based attribution of saviour-like missionary charisma from the romanticization of the leader through performance cues. References to 'strategizing' and 're-strategizing' in the previous interview quotes suggest that MOBL1R5 directly links the organization's turnaround to specific actions of the leader rather than attributing the success to the leader

based on inferences; this is even clearer in the case of MOBL1R3, who explicitly names such strategies. Further, according to MOBL1R6, even when Mahendra made his inaugural speech, the employees of MOB who did not have a permanent CEO for around eight months and were looking for a CEO desperately had thought Mahendra was the right person to sit as CEO. Thus, the leader has been recognized as a saviour even before the unfolding of the success of the business. Accordingly, the attribution of Mahendra with saviour-like missionary charisma can be considered recognition-based, though later it could have been reinforced by the inference-based attribution; thus, his charisma can still be considered archetypical.

Leader Extraordinariness

The fourth cognitive element of the present conceptualization is the most prevalent element in both case sites. The followers expressed their perceptions of the extraordinariness of their leader in different words/phrases such as 'I have never seen a person like him' (SINS1R4), 'he is far ahead of many people' (SINL2R1), 'what a great person he is', (SINL2R1), 'Every day, for three years...following a task, keeping up that momentum...is unbelievable...' (SINL1R3), 'if you take a lot of people...if you take Sri Lanka, he is extraordinary' (SINL2R6), 'an extraordinary individual' (MOBL1R2), and 'one having a memory like an elephant' (MOBL1R4) and 'a special and outstanding person' (MOBL1R5).

While the use of the terms 'special', 'outstanding' and 'extraordinary' can be considered the follower's perception that the leader is set apart from the rest, 'the use of terms/phrases like 'unbelievable', 'what a great person' and 'never seen' can be taken to express the follower's perception of the leader as being transcendental. This indicates that the extraordinariness of a leader is perceived with different intensities and the intensity of charisma ranges, as Weber (1947) claims, from 'exceptionality', 'exemplariness' to 'a supernatural being', superhuman being'.

While these followers recognize leader extraordinariness in the very specific behaviours of their leaders, they also see leader extraordinariness in the leader's routine behavior. For instance, SINL2R1 recognizes the extraordinariness of Samaravithana in very specific task behaviour - his preparation for the application solution test.

... there was something called the application solution test. The required input data was brought by Mr. Samaravithana. Everything that is needed for the warehouse was there. He had brought things that even the people who work in the warehouse may not have remembered. When I understood that, I felt what a

great person he is, because no one else would have done something like this...
(SINL2R1)

The quotes from SINS2R2 and MOBL1R4 as stated below indicate that followers also see leader extraordinariness in his day-to-day routines. While SINS2R2's description of his leader, Samaravithana, can be considered an indication of perceived extraordinary commitment, MOBL1R4 attributes charisma to Mahendra for his extraordinary memory.

...he is heavily involved in all the aspects, top to bottom, even in the minor things, even simple errors, he records them and sends them before the implementation rather than waiting for the vendor to find and correct them, follows on the dot and ensures that it is being corrected and so on. That is the very, I think great thing... (SINS2R2)

...he has an extraordinary memory. He can recall years...an incident which has happened years back and say, no, look here this is not how it happened and this is how it happened. He has a memory like an elephant. I always say to my colleagues ...look here, if he says something, then think twice. Don't challenge his memory... (MOBL1R4)

Although leaders' extraordinary commitment is treated as an aspect of charisma in the present literature, extraordinary memory is not. In fact, the followers in both case sites stated many other behaviours such as success in personal/family life and being humble even after reaching the highest position in the organization, which are not considered as attributes of leader charisma in the present literature. These can be taken as indications of difficulty indentifying 'a constellation of behaviors' (Conger & Kanungo 1987) as charismatic behavior and support for Jayakody's (2008, p. 837) argument '...what alone is important in defining leader extraordinariness is 'apartness from the ordinary' but not what constitutes it'. In other words, charisma should be defined as a cognitive phenomenon of followers rather than a behavioral phenomenon of leaders.

Finally, it should be noted that the interviews indicate that extraordinariness is attributed to the leader even when he is perceived as an ordinary individual in certain other aspects. For instance, both SINL2R1 and SINL1R3, who perceive Samaravithana as an extraordinary individual also state that Samaravithana under certain circumstances panicked and even SINL1R3 went so far as to say that:

...Mr. Samaravithana panics. When I was at the Communion Bank, I learnt from Wijayaratne. He doesn't panic at all...Now when there is a problem, I do the balancing part of it. I have learnt that from the Communion Bank project...

According to SINLIR3's point of view, in respect of 'panicking', Samaravithana is an ordinary individual. Note how he states that in fact he is calmer compared to Samarawithana: 'Now, when there is a problem *I do the balancing part.*' Despite this, SINLIR3 still considers Samaravithana as an extraordinary individual due to some other qualities/behaviours that he perceives in Samaravithana. Thus, like what is observed in leader prototypicality, a leader is considered extraordinary along the line of some behaviours, while the same leader is considered ordinary in terms of other behaviours.

Leader Group Prototypicality

Leader group prototypicality is treated as the fourth element of the cognitive dimension of charisma. As discussed previously, the literature provides sufficient evidence for the group prototypes-based attribution of charisma. Yet, in contrast to this evidence in the literature, none of the followers in this study were found to attribute charisma based on the group prototypicality of the leader. The followers do not refer even to their group prototypes. Further exploration of the interviews suggests that the contextual factors are likely to overshadow the group prototypes-based attribution of charisma in both case sites; thus the leader group prototypicality can still be taken as an element of charisma.

As stated above, group prototypes are contextual and on the one hand, they are dependent on the salience of an out-group or on which out-group is salient (Hogg & Terry 2000, van Knippenberg 2011), and the salience of the followers' group identity (Hais et al. 1997, Platow & van Knippenberg 2001) on the other. Consequently, in any situations where a relevant out-group is not salient and/or followers do not identify with the group, the charisma of the in-group leader cannot be expected to typify leader group prototypicality. If so, can weak salience of out-group and/or weak identification with the group be taken as a reason for the absence of leader group prototypicality of charisma in these leaders? The evidence suggests the case to be so.

The followers in neither SIN nor MOB refer to their organization as a community or a group and their competitors or other external parties as out-groups. Instead of possessing an identity based on their organizations, i.e., identifying with the organization, the followers especially in MOB see them as 'professionals' who have worked for or can work for their competitors

in the future without a conflict of interest with their present employer. For instance, MOBL1R3, who once left for a competitor and re-joined MOB later, stated that he, as a professional, finds no issue of shifting between competitors. Furthermore, even though they identify themselves as ‘professional’, their out-group, non-professionals seem less salient as no reference is made during interviews to non-professionals. Therefore, the absence of group prototypicality-based attribution of charisma might be attributed to the lower salience of the out-group than taking it as evidence to dispute the argument that charisma is attributed to the leader when the leader matches the group prototypes of the followers.

Charisma as a Constellation of Meanings

In summary, this study shows that charisma is attributed to the leader not only by the recognition of his extraordinariness alone, which is the central theme in Weber’s much popular definition and the sole basis of defining charisma in the neo-charismatic literature, or even, as the present follower-centric theories argue, not leader prototypes or leader archetypes or leader group prototypes alone. Instead, the attribution of charisma, as shown in the following figure, can take place through one or many of these processes concurrently, and thus charisma consists of several facets including leader extraordinariness, leader prototypicality, leader archetypality and also group prototypicality or some of them.

Figure 1: Illustration of Charisma as a Constellation of Meanings

Leader	Follower	Leader prototypicality	Leader group prototypicality	Leader archetypality	Leader extraordinariness
Mahendra	MOBL1R1	✓		✓	✓
	MOBL1R2	✓			
	MOBL1R3	✓			✓
	MOBL1R4	✓		✓	✓
	MOBL1R5			✓	✓
	MOBL1R6	✓		✓	✓
Samaravithana	SINL2R1				✓
	SINS1R2	✓			✓
	SINL1R3				✓
	SINS1R4			✓	✓
	SINC1R5				✓
	SINL2R6	✓		✓	✓

The extracts from the interview with MOBL1R1 given in Figure 1 illustrate that he attributes charisma to Mahendra along the line of leader prototypicality, leader archetypality and

leader extraordinariness and not through just one of them, for instance, leader prototypicality. Furthermore, MOBL1R4, MOBL1R6 and SINL2R6 attribute charisma through perceived leader prototypicality, leader archetypicality and leader extraordinariness, and thus support the argument that to these followers charisma means leader prototypicality, leader archetypicality and leader extraordinariness concurrently. Furthermore, SINS1R4 attributes charisma through leader archetypicality and leader extraordinariness and SINS1R2 attributes charisma through leader prototypicality and leader extraordinariness. This indicates that followers use not only multiple attribution processes but in addition to that, they tend to use different processes.

The differences in attribution of charisma among followers of the same leader are not limited only to the attribution process that each follower uses. The differences can be seen in the behaviour or traits through which followers perceive each dimension, i.e., leader extraordinariness or leader prototypicality. For instance, MOBL1R1 recognizes Mahendra as an extraordinary leader in terms of his 'workaholic' and 'extremely result oriented' behaviour, while MOBL1R4 recognizes the same in terms of 'extraordinary memory' and 'extraordinary personality'. MOBL1R3 too recognizes Mahendra as an extraordinary leader but contrary to both MOBL1R1 and MOBL1R4, he perceives Mahendra's extraordinariness as he sees Mahendra 'has not lost human qualities, even after reaching such a higher level'.

Accordingly, this study provides initial evidence for several insights on follower-centric charisma, especially in relation to its cognitive dimension. First, it illustrates that followers use multiple attribution processes concurrently, and the use of processes varies from follower to follower. Second, as a consequence of the first point above, a number of facets of charisma of the same leader varies from follower to follower; hence what each follower conceives as charisma varies from follower to follower. Finally, the study exemplifies that different followers recognize leader charisma through different behaviors and traits of the same leader.

Implications and Limitations

Theoretical Implications

The aim of this paper is to provide some initial qualitative evidence in support of charisma as a constellation of meanings, especially its cognitive dimension, and thereby conceptualize charisma as a constellation of leader extraordinariness, leader group prototypicality, and leader prototypicality and leader archetypicality. Supporting this thesis, the present study shows that charisma does not exist in the eye of the follower only as a leader prototypical or a

group prototypical or an archetypical or an extraordinary person that the previous researchers suggested but it exists as all or many of these forms concurrently.

In addition, the present study confirms the argument of Yagil (1998) that charisma is attributed even to close leaders and goes further to suggest that charisma is attributed to a leader through perceived extraordinariness even when the leader is perceived to be fallible in certain behaviours and qualities if he is perceived as extraordinary in other aspects.

Furthermore, these findings also contradict Weber's stance that charisma is unlikely to be found in everyday routine. Contrary to Weber's stand but in line with empirical evidence in Yorges, Weiss and Strickland (1999), this study indicates that followers tend to perceive leader extraordinariness in simple and routine day-to-activities such as, as shown above, 'recalling events' or 'sending emails'.

Implications for Practice

The present study has several practical implications. Firstly, it calls on managers to be aware of the possible implications of their own behaviour and traits on their charisma. The positive side of such implications is the possibility of leaders to manage their charisma by manipulating their own behaviour. Yet, the need for manipulating a wide spectrum of behaviours to match the situation makes the task difficult. This leads to the second implication-the need for leaders to be aware of their context- and its influence on their own charisma. These two implications signal leaders about the importance of self-awareness, sensitivity to the environment ranging from the immediate task environment to the followers' culture, the ability to read followers, and finally their own competence in impression management (Jayakody 2008, Riecher, Haslam & Hopkins 2005). ,

Limitations

Overall, this study has the strengths and weaknesses generally associated with qualitative studies. For instance, as Braun and Clarke (2013, pp. 280-281) state, the generalization of findings has been cited as a limitation while the capacity to make a deep and rich interpretative analysis has been frequently celebrated. Since the purpose of the present study is to provide the initial evidence for an emerging theory rather than to examine the generalizability of a theory, the issue of generalization associated with qualitative research is less important compared to its strength to elaborate on the theory. Furthermore, as this paper takes the social constructionist approach which assumes multiple realities, generalization of findings cannot

be taken as an issue. Finally, as indicated above, since the context of leadership is likely to influence the attribution of charisma, it is the meaning of behaviour and qualities of the leader rather than behaviour and qualities themselves that are useful in understanding leadership dynamics in another situation.

Conclusion

There are a few areas that researchers should further explore. First, no evidence is found in this study to support or reject the notion that leader group prototypicality is an aspect of leader charisma. This, as stated above, may be due to the low salience of out-group in both cases. Therefore, researchers may explore this using more appropriate cases such as organizations which experience intense competition.

Second, this study excludes inference-based and affect (emotion)-based attribution of charisma in spite of their significance in understanding charisma. It should be noted that emotionally driven attribution of charisma lacks a sound theoretical foundation on which empirical work can be undertaken. Thus researchers first need to strengthen it. Towards this end, researchers may benefit from the currently available literature on emotional contagion (Bono & Lilies 2006), aesthetics of leadership (Ladkin 2008) and theoretical and empirical work (Wasielewski 1985, Johnson 2008) that examines the role of leader affect and arousal in charismatic attribution.

Finally, this study indicates the context such as task environment, crisis and culture influences attribution of charisma. Thus the researchers may also examine such influences. The connectionist framework can be suggested as an appropriate conceptual framework for such studies as Hanges, Lord and Dickson (2000) suggested.

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An Empirical Study of Success Factors in Transforming Accounting and Engineering Professionals into Entrepreneurs in the SME Sector, Sri Lanka

Randi Kailashinie Thiranagama

Abstract

This paper examines the success factors in transforming Accounting and Engineering Professionals into entrepreneurs in the Small and Medium Enterprise (SME) sector in Sri Lanka. Employing a qualitative research approach methodology, twelve semi-structured interviews and three focus group discussions were conducted with entrepreneurs who have successfully become entrepreneurs in the SME sector. The findings of the study clearly indicate that personal success factors such as risk taking, need for achievement, internal locus of control, professional confidence, passion, need for recognition, need to serve society and opportunity seeking help Engineers and Accountants to emerge as entrepreneurs. It is further influenced by environmental success factors such as family background, perceived government policies, social networks and entrepreneurial culture. Moreover, it reveals that entrepreneurial engineers tend to start ventures in the field of technology whereas entrepreneurial accountants belong to various types of disciplines. The paper concludes with a discussion on the practical implications of the findings for Engineers, Accountants and national policy makers.

Keywords: accountants, engineers, entrepreneurship, environmental factors, personal factors, small and medium enterprises.

Introduction

This study examines the success factors which lead engineers and accountants to start their own businesses as SME entrepreneurs in Sri Lanka. Entrepreneurial ventures have been found to be instruments of change and economic growth (Aloulou & Fayolle 2005). The

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industry sector, of which approximately 90% consists of SMEs in Sri Lanka, represents about 26% of GDP of the country. Therefore the SME sector in Sri Lanka has been identified as an important strategic sector for promoting economic growth and social development of the country (Wickramasinghe 2011).

It is vital to have educated entrepreneurs for SME development in Sri Lanka. According to Romer (1994), the role of entrepreneurship has been highlighted by the new growth theory with an emphasis on “knowledge” as a major factor influencing economic growth. Acs and Varga (2005) identify the relationship between variations in entrepreneurial activity of countries and the spatial structure of economies with the dissemination of knowledge, and economic growth. Therefore, it confirms the importance of graduate entrepreneurs for national development (Muhammad et al. 2011).

Gamage (2010) identified that educated entrepreneurs are important for the development of SMEs because technical and managerial skills are important factors in SME development. In addition, owing to the absence of different skills such as marketing and business development, most SMEs remain at the same level and do not grow into large scale businesses.

The presence of more professional entrepreneurs is significant for the development of the SME sector in a country. However, in the Sri Lankan context, the majority of professional engineers and accountants prefer working for an employer rather than starting their own businesses (Mallawa 2000). Motivating these professionals to move towards entrepreneurship is a challenging feat in any economy (Alwis et al. 2010). The perceived risk and the opportunity cost associated with full-time entrepreneurship can be a sufficient deterrent for a professional to forego the safety of being a wage earner (Alwis et al. 2010).

The outflow of migrating professionals has been continuing since 1960 mainly to work and live in the UK, USA, Canada and Australia (Liyanagama & Wijewardana 2011). Regardless of the demand for jobs especially in engineering and accounting, 115 engineers and 143 Accountants have left the country adding to the shortage of knowledge workers in the country in 2007 (Liyanagama & Wijewardana 2011). Also in the Sri Lankan context, it has been shown that this trend among engineers who have received patents for their inventions is much lower than in other non-engineering sectors (Mallawa 2000). Similarly, there is hardly any data available about entrepreneurs with an accounting background who have started their own business and not enough empirically validated data about entrepreneurial accountants. It is important to note that the emergence of entrepreneurial accountants is not impossible because the functions of an accountant may not be routine, unchallenging or risk-free. There is much room for creativity, initiative and risk-taking (Gunawardene 2011).

This paper makes use of the experience of Sri Lankan entrepreneurs from engineering and accounting backgrounds to understand their internal and external motivations to become entrepreneurs. It also highlights the impeding factors that prevent them from becoming entrepreneurs.

Literature Review

SMEs and Entrepreneurship

Entrepreneurship plays an important role in the economy of a country by extending innovation, nourishing competitiveness, creating jobs and further enhancing economic richness (Guasch, Kuznetsov & Sanchez 2002, Holmgren & From 2005). This concurs with Schumpeter (1934), who emphasized the role of the entrepreneur as a prime causative agent of economic development. The emergence and development of entrepreneurship is an important phenomenon in contemporary economies. Entrepreneurship is strongly linked to SMEs, which are the main driving force in developed market economies. In many developed countries, the ratio of SMEs to the total number of enterprises is higher than 95%, while 60% of the available workforce is employed in those firms (Schmiemann 2008). However, in Sri Lanka, there is not even a clear definition of SMEs. Different government agencies use different criteria to identify SMEs. However, using the size of capital and the number of employees as the criteria, the Industrial Development Board (IDB) defines a small industry as an establishment whose capital investment in plant and machinery does not exceed Rs. 4 million (US\$ 42,000) and the total number of regular employees does not exceed 50 persons (Central Bank of Sri Lanka 1998). The Department of Small Industries (DSI) classifies enterprises with a capital investment of less than Rs. 5 million (US\$ 52,500) and fewer than 50 employees as SMEs (Ponnamperuma 2000).

Personal Success Factors

Personal factors have been studied by entrepreneurship researchers as the reasons for new venture creation. A number of psychological attributes have been suggested as predictors of entrepreneurial behaviour in the entrepreneurship literature, with some degree of consensus. According to Gorman et al. (1997), the propensity for, entrepreneurship is associated with several personal characteristics: values and attitudes, personal goals, creativity, risk-taking propensity, and locus of control. Of the personal characteristics, McClelland (1961) proposed motivation to achieve, taking risks and locus of control as important characteristics.

McClelland (1961, p.210) emphasized that “practically all theorists agree that entrepreneurship involves, by definition, taking risks of some kind”. Risk taking appears to be one of the most distinctive features of entrepreneurial behavior, since creating new ventures is by definition a risky business. Successful entrepreneurs would be willing to bear risk. But they must not only have the motivation to bear risk but must be able to bear the same risk (Say 1971).

In McClelland’s (1961) *The Achieving Society*, the need for achievement (n-Ach) trait has been empirically linked to entrepreneurial activity. The need for achievement is defined as a tendency to choose and persist in activities that hold a moderate chance of success or maximum opportunity for personal achievement satisfaction without undue risk of failure. McClelland conducted a number of studies demonstrating that high n-Ach and the subsequent manifestation of the above behaviours correlated strongly with entrepreneurial success.

Rotter (1966) defined locus of control as an individual’s perception of the underlying main causes of events in his/her life. Or, more simply, the individual believes that his/her behaviour is guided by his/her personal decisions and efforts (internal); or is unrelated to his or her actions and is guided by fate, luck, or other external circumstances (external). People with internal locus of control believe that they can control what happens in their lives. On the other hand, people with external locus of control tend to believe that most of the events in their lives result from luck, being at the right place at the right time, and the behaviours of powerful people.

Environmental Success Factors

Entrepreneurship researchers have found that environmental factors such as satisfactory government support, access to capital and support of family and friends contribute to the success of SMEs (Benzing et al. 2009).

The ‘family embeddedness’ perspective describes the impact and the importance of family for the entrepreneurial career of their offspring (Aldrich & Cliff 2003). Experiences during early childhood and socialization at home and in school probably shape the attitudes of people towards entrepreneurship (Basu & Virick 2008). Parents act as initial role models and parents who are active in a family business influence the future entrepreneurial intentions of their offspring by changing attitudes and beliefs, for example, self-efficacy (Shapero & Sokol 1982).

Many governments in the world (Chaston 1992, Mulhern 1996) have been paying much attention to SME development in order to strengthen the national economy. In short, government support is a necessary condition for fostering SME development. Government regulations were identified by Reynolds and Lancaster (2006) to be among the top problems faced by UK SMEs. In addition to lack of financial support as mentioned above, lack of institutional support was an obstacle to SME development (Mead & Liedholm 1998, Swierczek & Ha 2003).

Most people have contacts; regular, frequent or sporadic, with a great many other people (Pool & Kochen 1978), and an individual's personal social network consists of all of the people that the individual knows both well and not so well (Barnes 1972). Entrepreneurs' personal social networks have been called the 'most significant resource of the firm' (Johannisson 1990, p. 41), and social encounters between an entrepreneur and his/her network contacts are often a source of new venture ideas (Christensen & Peterson 1990). To establish a firm, potential entrepreneurs look for relations on the basis of common interests or experience in establishing and running a business (Nohria 1992). Entrepreneurs are also linked to people and organizations that interact among themselves and these contacts can widen the availability of resources that sustain a new firm (Hansen 1995). These relations may extend across professional networks, reaching friends, and colleagues from earlier jobs.

The literature review shows evidence that personal factors such as risk taking, need for achievement, locus of control and environmental factors such as family background, social networks and perceived government policies impact a person becoming an entrepreneur. The researchers used those six factors as a framework to empirically validate whether the same factors or different factors influence engineers and accountants to become entrepreneurs in the SME sector.

Propositions

The following propositions are identified in relation to investigation:

- P1: Personal success factors of risk taking, need for achievement and locus of control influence engineers and accountants to become entrepreneurs in the SME sector.
- P2: Environmental success factors of family background, social networks, and perceived government policies influence engineers and accountants to become entrepreneurs in the SME sector.

Methodology

This study was based on the social constructionist philosophical premise, and employed the grounded theory strategy of inquiry (Strauss & Corbin 1990). As this was an explorative study, the qualitative method was used. Leedy and Ormrod (2011) recommended the qualitative method for research that interprets certain phenomena. Therefore, a qualitative research technique using one-on-one in-depth interviews was considered to be the most suitable process to identify the success factors affecting engineers and accountants to become entrepreneurs.

The target population consisted of engineers and accountants, male and female, of varying ages, who have successfully made the transformation from an engineering and accounting career to entrepreneurial engineer and accountant. The criteria for selecting informants were: being an individual with a professional qualification or a degree in the fields of Engineering and Accounting and being the founder of the venture with active involvement in the venture. A summary of the informants together with the profession and the business areas is given in Table 1.

Table 1: Details of Informants

Informant Reference	Profession	Area of the Business
GEML	Telecom Engineer	Telco Solutions
EBHL	Mechanical Engineer	Automation and Customization of Electronic/ Electrical Solutions
EDBL	Telecom Engineer	Software Solutions
ETTM	Software Engineer	Customized Trading and Consultancy
ACCD	Accountant	Auditing & Consultancy
ATMD	Accountant	Manufacturing
APTC	Accountant	Bakery
ESEV	Software Engineer	Software Solutions
ARAL	Accountant	Education
AUMH	Accountant	Heating
EDKR	Software Engineer	Online Delivery Services
EWBT	Software Engineer	Transport

Source: Primary Data

Convenience and snowball sampling were used. As the population was unknown, non-probability sampling was considered the most appropriate sampling technique. The interview guide was derived from the literature review and pilot study. Data analysis in qualitative

research can be compared to “the peeling off the layers of an onion”. It is where the researcher peels off the layers of data, applies his analytic powers and emerges with the findings (Merriam 1998). The analysis method used in this research project was a combination of narrative analysis, constant comparative analysis, and content analysis.

Qualitative research needs to convince the reader that the study makes sense, unlike quantitative research that has to convince the reader that procedures have been followed faithfully (Merriam 1998). In order to introduce rigour into this research, the analyzed data was presented to the interviewees and thereafter confirmation was obtained of the accuracy. Further, focus groups were used to validate the preliminary findings and they were discussed with experts, in order to determine whether the results are reasonable. This will reduce the researchers’ bias, which as Daft (1983) points out, is inevitable. Instead of trying to achieve an objective position, it is preferable to accept the subjectivity of the interview process and to introduce rigour by using another researcher’s opinion (Gillham 2005). Therefore, the researcher discussed the analysis and findings of the study to achieve objectivity.

Results and Discussion

Influence of Personal Factors in the Transformation of Employed Engineers and Accountants into Entrepreneurial Engineers and Accountants

Risk taking: Early definitions of entrepreneurship centred on the willingness of entrepreneurs to engage in the calculated business-related risk (Brockhaus 1982). McClelland (1961, p.210) supported the postulation that ‘practically all theorists agree that entrepreneurship involves, by definition, taking risks of some kind’. Risk taking appears to be one of the most distinctive features of entrepreneurial behaviour, since creating new ventures is by definition a risky business. Successful entrepreneurs would be willing to bear risk. But they must ‘not only have the motivation to bear risk but must also be able to bear the same risk’ (Say 1971).

This study found that these entrepreneurial engineers and accountants not only had the motivation to bear the risk but also were able to bear the same risk.

...I felt it is risky but I wanted to do it...That was the only thing. I was struggling with that decision during many nights. Anyhow I made the decision. It is my own decision. It is my own risk... (ESEV)

Further, it was found that they had borne the risk of transition from employment to entrepreneurship. EGML was well aware that he encountered a risk during the transition but it was a calculated risk and he analyzed it in every way before he moved in.

...That is a risk that every entrepreneur has to undertake I think... But I would say it was a well calculated risk. I calculated everything. I calculated the potential market that I have. The potentials of the things that I could do and... especially about the connections I have...human connections... In fact there was a risk. I can't say that there was no risk. But I think the calculated risk went well as I planned...

A significant finding of this study is that although all these entrepreneurial professionals tend to take a risk, it is a calculated risk and that calculated risk is minimized strategically. It is evident in the following responses of the interviewees.

... I had that risk...That is why I signed for the job. Six months after the signing the agreement while I was in the final semester things were successful. I was sure that I would earn from my own company as I earn from the job. So that risk became lower. That is why I rejected that job completely and went for that... (EDBL)

In contrast with the literature reviewed, there was a case study of one interviewee who identified that employment is riskier than self-employment. ATMD identified the risk of being an entrepreneur as follows:

... I felt it...But doing new things is less risky than working in a company because everything is under your control...

This response indicates that self-employment is more demanding and provides lower and riskier earnings than paid employment. These respondents did not directly state that they undertake the risk of transformation from employment to entrepreneurship without feeling it. They actually took calculated risks by minimizing them strategically. Based on that fact, it can be suggested that engineers and accountants become entrepreneurs by taking calculated risks, knowing that more benefits are there being an entrepreneur. Therefore risk taking can be considered a most important success factor in this transformation of engineers and accountants into entrepreneurs.

Need for achievement: There is a general consensus that 'need for achievement' (n-Ach) is a significant factor in entrepreneurial success. One of the most widely discussed traits of entrepreneurs is the n-Ach. McClelland's (1961) work was a pioneering effort to determine whether entrepreneurs display a certain psychological profile.

A number of interviewees stated what they want to achieve from their ventures as follows:

...but I want to be a global company...That is why I started with the name X International because I wanted to be in the international market from the beginning... I needed to have the sense of achievement. So I don't need even my own name coming out. I need the satisfaction of doing something... (EGML)

...I think I have achieved something. Rather if I worked...I mean as a businessman I have achieved lots of things. I cannot compare it with previous experience... (EBHL)

In all these instances it appears that need for achievement has a direct influence as a success factor for the engineers and accountants to become entrepreneurial engineers and accountants in the SME sector.

Internal locus of control: Locus of control refers to the perceived control over the events in one's life (Rotter 1966). People with internal locus of control believe that they are able to control what happens in their lives. On the other hand, people with external locus of control tend to believe that most of the events in their lives result from being lucky, being present at the right time, and the behaviours of powerful individuals. Brockhaus (1982) found that entrepreneurs have greater internal locus of control than the general population; therefore entrepreneurs believe that the outcome of a business venture will be influenced by their own efforts. Brockhaus (1982) further suggested that locus of control could distinguish entrepreneurs who are successful from those who are unsuccessful.

ATMD was very concerned about the control of his own life. In his words:

... when you work in a company how you worked, what you get, promotions are not under your control. All are under the control of someone else. However, if you start the business you put your effort...What you achieve is within your control. If you do well you would get the benefits out of it.... But if you are working in a company everything is the other way around. It is outside your control...

Professionals with high internal locus of control believe that they are able to exercise control over their environment and are unlikely to conform to external influences. Therefore, these entrepreneurs with high internal locus of control, relative to those low on this trait, will

be more likely to try new approaches, pursue new opportunities, initiate change instead of reacting to events, and take risks. Therefore it is clear that internal locus of control is a success factor influencing engineers and accountants to become entrepreneurs.

Professional confidence: Professional confidence can be described as a dynamic, maturing personal belief held by a professional or student. This includes belief in the role, scope of practice, significance of the profession, and is based on their capacity to competently fulfill these expectations, fostered through a process of affirming experiences (Holland et al. 2012).

The data suggests that entrepreneurial engineers and accountants put thoughts and plan into their venture activities according to their inner feelings such as “I can do” through the professional background they are in. The decisions that they make as a consequence of this process seem to be robust and, although they may be aware of others disagreeing with their decision, they are still confident about their decisions. The following responses bring clear evidence of this:

...I was not concerned about what others said. What I was concerned was doing my own thing in the area which I know. You have a control of what you do ...you know your field and capacity is... (EBHL)

To analyze this further, it was found that the engineers were mainly capable of doing business in the area that they had specialized in. However, based on the sample that the researchers had interviewed, most of the entrepreneurial accountants are engaged in different types of commercial activities which they had never specialized in before. It was the knowledge of Accounting and Finance that gave them confidence in handling any types of business. This is demonstrated in the responses given by AUMH:

...Since I wanted to manage or develop this company, I had to learn everything. My financial knowledge really helped me to make the company a success. The engineer is normally the main man of the company's success. However he does not have a financial background. However I had all the areas known to me. I knew finance, marketing, management, HR etc. which helped me to manage this company very well. It is the real reason for its success...

The study argues that professional confidence is a success factor which facilitates the capacity of the professional individual to broaden and strengthen their likelihood of transforming as entrepreneurs rather than working in an organization.

Passion: Passion is deeply embedded in the folklore and practice of entrepreneurship. Dating back to Schumpeter's early writings (1951), researchers and practitioners alike have invoked passion to explain entrepreneurial behaviors that defy reason-based explanations, such as unconventional risk taking, uncommon intensity of focus, and unwavering belief in a dream. Entrepreneurial passion is defined as an intense positive feeling toward entrepreneurial tasks and activities that are relevant to the entrepreneur's self-identity (Cardon et al. 2009). Other scholars have conceptualized entrepreneurial passion as love of the entrepreneurial work (Baum & Locke 2004). Passion implies strong feelings and high motivation. Most Entrepreneurs attribute their persistence, particularly in the beginning phase of starting a firm, to their great passion. Thus, entrepreneurial passion should be a driver and source of energy to work hard, long hours with high levels of effort and persistence (Baum & Locke 2004, Cardon et al. 2009).

EGML and EDBL went on to explain how they interpret their passion:

... It is not like that I have been passionate not only in this field. In fact, I have interest ... passionate in many fields...I don't know why? In fact, I have interest in medicine as well. And perhaps I might do that. So it can happen. My interests are diverse...It is my passion...without that you can't succeed. You should be passionate in what you do. You have to have that... (EGML)

...We have to be passionate about what we are doing. Basically it is the thing that we love to do. If we are passionate about something we always try to do that and improve that...From my school days I had the passion to do computer science things... (EDBL)

Even if the entrepreneurs described passion differently, they tend to see it as arising from an intrinsic force such as feeling a love for what they do. They experience their passion physiologically or as feelings, which motivate action in response to these feelings, and contribute to the continuance of entrepreneurial actions. Thus, the presence of passion seems to be a key element in their capacity to sustain entrepreneurial action, particularly in the face of the challenges, difficulties and stresses of entrepreneurship. Thus, this study provides evidence that having a passion is a fundamental personal success factor which can be attributed to entrepreneurial engineers and accountants.

Need for recognition: Recognition can be described as an individual's intention to enjoy status, approval and recognition from one's family, friends and other people in the community

(Bonjean 1996, Nelson 1968). There is little literature on the concept of recognition and this study found that there are both empirical and theoretical gaps.

According to the responses of the interviewees, the need for recognition is far less important for these engineers and accountants personally. However, they expect to receive recognition in any other form from society directly or indirectly and it becomes a factor affecting engineers and accountants to become entrepreneurs.

When asked: Your transformation as an entrepreneur may be seen as a businessman by the society. Didn't you feel that you were going to lose the recognition given by society to the engineer?

There was a definite pattern in the responses. EBHL responded:

...No. The thing is we are different. We did an engineering degree. And I can't be a Machine Designer...In my business card my name appears as Director/Mechanical Engineer. I do not say that I'm a director. I say I'm an Engineer. If I say I am a Director I will not get good recognition...

The following response was given by EGML:

...I don't think that engineers are that recognized or respected in Sri Lanka... Apart from their set circles....But in general (among?) the public the role of engineers is not well known compared to doctors. And I'm not concerned about the recognition. It is not really a factor. I don't want to be recognized personally. But I need to have the sense of achievement. So I don't need even my name to come out. I need the satisfaction of doing something...

However, the same EGML expressed his thoughts differently in another situation when he was asked where he wanted to be. His response was as follows:

... At the moment we serve only the Sri Lankan market. But I want to be a global company. That is why I started with the name X International. Because I wanted to be at the international level from the beginning... We are talking to overseas clients and we have a number of contacts overseas and we have been given recognition by them. So...hopefully in the future we will be able to be a global company...

Accordingly, EGML wants his company to be globally recognized.

A similar pattern reflected in the response given by ACCD.

... I want to go to the international level as my next step. X corporate should start the business under same brand at the international level. I want my firm to be also added to the existing branded audit firm chain in Sri Lanka...

From the evidence it became apparent that although entrepreneurial engineers and accountants do not expect the personal recognition, they want to have recognition for their venture and thereby achieve some kind of recognition. Therefore, it gives clear evidence that the need for recognition is a success factor affecting engineers and accountants to become entrepreneurs.

Independence: Independence can be described as an individual's desire for freedom, control, and flexibility in the use of one's time (Schein 1978, Smith & Miner 1983). Independence is taking responsibility to use one's own judgments as opposed to blindly following the assertions of others (Shane 2003). Many researchers have observed that the entrepreneurial role necessitates independence: (1) the entrepreneur takes responsibility for pursuing an opportunity that did not exist before; (2) entrepreneurs are responsible for results, whether achieved or not achieved and, (3) individuals may pursue entrepreneurial careers because they desire independence. Hisrich (1985) found that one of the prime motivations for women starting business was a desire for independence.

APTC's explanation of her experience in her previous workplace clearly indicates how a similar need of the same person is seen from different standpoints because of the freedom of an individual. She further explained that there was no freedom in her previous work and she had to be in the office whether she had work or not. And it did not suit her and once she started her own business it has become the other way around.

A similar pattern emerged in the following response as well:

... If you are working in a company, you can't do what you want to do... Then free time is also a matter... I have much more free time even though I have to take care of my business more than if I work for a company. You don't have to wake up early in the morning and go to work... I like the freedom. Nobody is controlling you... (A focus group respondent who is a Chartered Accountant)

The interviewed entrepreneurs felt that they were far more independent as entrepreneurs than when they were employed under someone else. In corporations, the interviewees were restricted in how they choose to use their time. There is little room for freedom, control and flexibility in using one's time as the rules and procedures of corporations dictate what is or what is not permitted. As entrepreneurs they are free to use their time as they feel necessary. Independence was highly rated in most cases and they stated that they wanted their freedom in order to live according to their own lifestyles. This is another success factor that prompts them to become entrepreneurs.

Need to serve society: There is no literature found on the need for entrepreneurs to serve society. The need to serve society can be identified as an activity that improves the quality of life in society.

However, the findings of this study reveal a new concept that these professionals have a need to do something for society. The response given by ATMD indicates the pattern of this new concept.

... I think I want to contribute to Sri Lanka...other than that I have changed the lives of a few others as well...

The need to create jobs is clear evidence that entrepreneurial engineers and accountants have a need to give some social benefit to society and it has encouraged them to become entrepreneurs. Further, it is clear that there is a theoretical and empirical gap regarding the need for entrepreneurs to serve society.

Opportunity seeking: Opportunity identification involves not only technical skills like financial analysis and market research but also less tangible forms such as creativity, team building, problem solving, and leadership (Long & McMullan 1984, Hills, Lumpkin, & Singh 1997, Hindle 2004) while value can, of course, be created not only by starting new activities but also by improving the operation of existing activities. Research on opportunity identification tends to place greater emphasis on new activities. It was found that these professional entrepreneurs tend to always find opportunities in the market and the following responses bear evidence of that:

... There was an environment that I wanted to move away from my employment
...there was an environment for me to leave...I thought why I was existing and what I was doing. ..Why I am not going to take that chance... (ESEV)

These engineers and accountants always look for the opportunities available in the market and they do not hesitate to use their expertise to grab them. They are always on the lookout for opportunities and follow them. This shows that opportunity seeking is a success factor affecting engineers and accountants to become entrepreneurs.

Influence of Environmental Factors in the Transformation of Employed Engineers and Accountants as Entrepreneurial Engineers and Accountants

Family background: People who have a parent or close family member, who is self-employed are more likely to follow an entrepreneurial career (Matthews & Moser 1996, Drennan et al. 2005). A family business background leads perhaps to lower barriers to entrepreneurial entry, since those having it may capitalize on their social ties and social capital (Greve & Saleff 2003). Parents act as initial role models and the parents active in a family business influence future entrepreneurial intentions through changing attitudes and beliefs, as for example self-efficacy (Shapero & Sokol 1982, Krueger et al. 2000).

As Basu and Virick (2008) stated, the experiences during early childhood and socialization at home and in school probably shape the attitudes of young people towards entrepreneurship. The literature is supported by the following statements given by the interviewees such as:

... From my childhood itself my father said...If I say it in his own words...
“mokekutawath yatath wela wela karanna epa” (i. e., ‘Don’t do anything under someone else’) That was the main thing which came to my mind...
(EBHL)

... My father always encouraged me...My father’s first advice was that there is nothing impossible and that really struck with me a lot. I was a kid at that time. It hit me deeply... (ACCD)

According to the information gathered, family members provide assistance in the process, and sometimes help in finding the capital needed. The decision to become an entrepreneur or start a new business venture is complicated and multi-faceted, and previous studies by Kirkwood (2007) support the findings of this study. Parents, childhood experience and family businesses appear to be a strong influencing factor in the process.

According to some respondents, most of the undergraduates were from middle class or even lower than that and they depended on their parents and the government. Most of them were not trained to earn their own money. At the time these undergraduates passed out from

university their parents were old. Therefore soon after graduation, they had to find a job to earn for the family. They not only had to take care of their parents, but also to take care of their brothers and sisters for their education that resulted in them being unable to take risks at that stage due to the commitment that they had towards their families. Hence family responsibilities prevent them from emerging as entrepreneurs although they want to be so. Apparently, this study indicates that family background is a most decisive success factor that matters when these professionals start thinking about their own ventures.

Social networks: No person has perfect information with which to make choices and decisions; individuals experience 'bounded rationality' because they are limited in their ability to process and store information (Simon 1976). In an earlier study, Hills, Lumpkin and Singh (1997) reported that entrepreneurs who used social network sources to learn of entrepreneurial opportunities (labeled 'network entrepreneurs') recognized significantly more opportunities than those who recognized the opportunities for their firms individually ('solo entrepreneurs'). They reported significant differences between solo and network entrepreneurs on a number of factors.

The evidence from this study revealed that these two professional groups have exploited their opportunities through their networks.

EGML responded as follows:

... Connections make all the differences. So networking is important....You have to approach them at the correct time....basically, the network essentially boosts your business...New connections were definitely a factor. If I didn't have a network obviously I wouldn't have started the business... because you can't just go to somebody and talk about your products or your business. You need to have prior connections...

A similar pattern emerged from the interview with ACCD:

... We can't put a paper advertisement. Printing leaflets...We can't put bill boards. Everything is about networks. I started at zero I did not have any one. I had only few friends ... That was very important because I did not have any clients. So first I spoke to them..."Guys, I want assignments from your companies"...They did it. Since they did it for me, I got clients...For my success networks helped me...

The important role played by contacts within an entrepreneur's social network to idea identification and subsequent opportunity recognition was empirically supported by the evidence from this research. Indeed, collaboration with industry on the one hand, and awareness and ability to exploit commercial opportunities on the other, are likely to be self-reinforcing. This is because the higher the level of interaction with industry, the more likely it is that these professionals will recognize the potential applications of their research and the better will be their understanding of market conditions and business processes. Thereby having a social network leads engineers and accountants to become entrepreneurs.

Perceived government policies: External factors play a role in the process of entrepreneurship. They could be a country's economy, competition, government regulations, etc. (Shane 2003). Environmental factors are important in deciding to act entrepreneurially; it is influenced by the legal system of the country, the industry and the maturity of it, available external capital, the state of the economy and so on (Shane 2003). The performance of the venture is influenced by government policies. One of the important aspects of government in entrepreneurship is to increase the business birth rate and survival rate of ventures with favorable policies for the small business (Mokry 1998).

In this study it was found that EDBL has a very positive perception of government policies:

.... I see a lot of encouragement from government for ICTA companies. To be honest, the success of our company really depends on the awards that we got....Up to now we got an mBillionth award, four Swaabhimani awards and one MBQSA. In our success story the awards are at the top. Because of them we have got a lot of recognition. If ICTA did not encourage us to apply for awards and if they did not organize such award ceremonies we wouldn't be recognized for our products or our talents...

EGML and ACCD are appreciative of the prevailing tax system mainly because local software development is free from income tax in Sri Lanka.

However, the perception of almost all interviewees is that government organizations are very ineffective:

... However the coordination of some government departments such as tax department is very inefficient ...“I do not think that there is a positive encouragement to support entrepreneurs by the government... (ACCD)

Further, the study reveals that the prevailing policies of the government are not a success factor in the performance of the entrepreneurs and favorable policies help countries to succeed. The majority of interviewees agreed that there is not enough support available from the government for entrepreneurs in Sri Lanka. This indicates that the perceived government policies affect engineers and accountants as an environmental factor, for them to become entrepreneurs.

Entrepreneurial culture: The document produced for the G20 Young Entrepreneur Summit by Ernst and Young (2011) describes the entrepreneurial culture as follows:

A strong entrepreneurial culture is the foundation of a dynamic economy. It reflects how a country's society supports the ideas and initiatives of entrepreneurs and how it can direct young people towards a career in business by enhancing their skills. A strong entrepreneurial culture means there is less of a stigma associated with failure and recognizes the crucial role of entrepreneurs in creating new jobs

This study found that the Sri Lankan culture does not support entrepreneurship and the existing culture is more towards employment. This was evident in all cases that were explored in interviews and the following responses can be extracted as examples:

... Whenever I go for a family gathering or wedding, all ask why you are baking, why you don't go for a job... you know that is how people think... (APTC)

...Then I continued my third year and fourth year in university. Then more pressure came from my parents, lecturers and society that I have to do a job even for one year. So I felt very down, because at one point I also decided that I would have to do both... (EDBL)

The prevailing non-entrepreneurial culture in the country was further highlighted by the response received from the focus group:

... There is big cultural problem in Sri Lanka. There is no proper respect for businessman. In Sri Lanka, a businessman is known as 'mudali'. I think that is a big issue. It is a big cultural problem. In society they don't give respect to a businessman compared to professionals... (A focus group respondent with an engineering background)

Listening to these respondents it was evident that the Sri Lankan culture is not a success factor in entrepreneurship. Sri Lanka's society is a risk averse society and thereby heavily pressure individuals to become job doers rather than entrepreneurs.

Implications for Theory and Practice

The traditional research stream on entrepreneurial behaviour has emphasized personal and environmental factors to explain why someone starts a new firm. The personal factors, or traits perspective, addresses several human attributes, such as risk taking (McClelland 1961), need for achievement (McClelland 1961) and internal locus of control (Rotter 1966). Similarly, it further emphasized that the environmental factors such as family background, social networks and perceived government policies also influence new starters. However, based on the findings discussed, it is clear that personal factors such as risk taking, need for achievement and internal locus of control as well as environmental factors such as family background, perceived government policies and social networks, influence engineers and accountants to become entrepreneurs in the SME sector. In addition, it was found that there are some other factors not proposed during the initial stage, namely, professional confidence (Holland et al. 2012), independence (Schein 1978, Smith & Miner 1983), passion (Baum & Lockey 2004), need to serve society, opportunity seeking (Long & McMullan 1984, Hills Lumpkin & Singh 1997, Hindle 2004) and entrepreneurial culture (Ernst & Young 2011) which are specific impeding and impelling factors for employed engineers and accountants to become entrepreneurial engineers and accountants in the SME sector in Sri Lanka.

Recommendations for Engineers and Accountants

The findings highlight that engineers with a business background are able to exploit their opportunities more easily in their field of technology. Esbach (2009) concluded that together the combination of management and engineering provide an ideal underpinning for technological innovation and entrepreneurship. Therefore, it can be suggested that engineers who intend to become entrepreneurs should gain management knowledge too.

The findings emphasize that accountants are capable of doing many types of businesses even if they are not directly related to their profession. The supportive factor for that particular skill is the professional background that they have, covering a wide spectrum of business areas. Hence it is suggested that accountants should change their conventional way of feeling, thinking and acting to become more innovative and use their ability to search for new business opportunities. Being more practical enables them to use their professional background to become an entrepreneur in any business area.

The findings further revealed that both employed engineers and accountants, who have more family responsibilities and expect a high income soon after their graduation, should exploit business opportunities during the early stages of university life rather than in the final year. It helps them to develop their businesses from an early stage of their professional life. From these findings, it is concluded that having a proper income from the business at the end of one's university life enables these professionals to continue with their businesses rather than chasing after employers to get a job.

Moreover, it is suggested that for any engineer or any accountant the personal factors discussed in this study can be learnt or developed by them, and would be essential to emerge as entrepreneurs.

Implications for National Level Policy Makers

According to the findings it was revealed that perceived government support is not adequate for starters mainly due to inefficiency in government bodies. Therefore, the first implication would be that national policy makers should create a favorable environment for entrepreneurs by creating a supportive government environment for emerging entrepreneurs. Next, attention should be drawn to the prevailing tax system and it should be revised to provide a tax holiday for the first year as emerging entrepreneurs are really struggling to develop their business at the initial stage. According to the findings, maintaining documents to prove accounting details at the very first stage with the purpose of paying taxes is a real hassle for emerging entrepreneurs.

Secondly, the curricula of the education system should be revised to include entrepreneurship as a subject with the intention of producing more entrepreneurs among the professionals. The Sri Lankan education system aims to prepare students for government employment (Nanayakkara 1984). Engineering and Accounting undergraduates who are passionate to start their own venture should be recognized separately in universities. For example, engineers who have an interest in starting their own ventures should be given more business knowledge covering both theoretical and practical aspects. The focus of the education system should not be just to create engineers and accountants; rather it should be to foster entrepreneurial engineers and accountants who are passionate about what they do.

Thirdly, government should encourage the industry to give business opportunities for university students from the beginning of the second year of their university life. Thereby they get a chance to earn money and also get training on how to earn money. Hence the

responsibility of the government is to implement processes to improve the linkage between university and industry by being a mediator. Government should play a facilitative role and encourage more private sector participation providing skills development programmes (Kelegama 2002). Further, the industries and companies who run those kinds of programmes should be rewarded and recognized by the government.

Finally, although the economic context of Sri Lanka has changed in favour of entrepreneurship, the social cultural contexts need further changes to give impetus to entrepreneurship since the findings showed that the prevailing Sri Lankan culture is not entrepreneur- supportive (Ranasinghe 1996). Therefore, it is necessary to create a culture that shows more respect and recognition for entrepreneurs in the country. Thereby, the encouragement from society to become an entrepreneur would be higher than at present. Therefore, national economic policies should be prepared in a way that promotes more entrepreneurs from among engineering and accounting professionals in the country.

Limitations

Convenience sampling and snowball sampling may have resulted in the research being homogenous in nature. Therefore, the conclusions drawn from this data may not accurately represent the population. The interviewees were limited only to the Colombo District and the limited availability of the statistics relating to the research area should also be considered as a limitation.

Directions for Future Research

It was found that there are numerous stories of those entrepreneurs regarding their successful journeys and they strongly felt the need to share them with the researchers. It was also revealed that there are some secrets to success in their entrepreneurial lives.

Since the research focused only on engineers and accountants, the same research can be extended to other professionals such as marketers and academics to understand how they become or could become entrepreneurs. Since entrepreneurial ventures have been found to be instruments of change and growth of economies (Aloulou & Fayolle 2005), it is worth studying other areas as well as it leads more educated entrepreneurs into the economy of a country.

Although women were included in the sample of entrepreneurs interviewed, this research was not able to make any generalizations as to gender as the number of women in the sample

was too small. However, during the interviews, it was understood that family commitments are an impeding factor for them to emerge as entrepreneurs. Therefore, it would be interesting to conduct further research, looking into the gender variable as it would be most relevant. Women are equally capable of making a substantial difference in entrepreneurial activities. Therefore, their tendency to become entrepreneurs should be investigated further.

The focus of this research was not on any particular religious group or specific race or nation. During the research it was found that Muslim or Islamic entrepreneurs have a special relationship with their religion where they follow certain principles as guided by the Koran. Therefore, it is worth extending the same research to different contexts, ethnic groups, etc.

The research focused on both engineers and accountants as one set of professionals and did not differentiate between these two groups in carrying out the research. However, it was revealed that entrepreneurial accountants are engaged in various types of business whereas entrepreneurial engineers are mainly engaged in technical fields. Therefore, differences of entrepreneurial behavior between these two groups should be further investigated.

Conclusion

Entrepreneurs can be developed through mental programming and a lifelong learning process. According to Nabi and Holden (2008, p. 547) and based on the cautious analysis suggested by the researcher personal factors what makes engineers and accountants successful entrepreneurs can be learnt or developed by themselves. Therefore, any engineer or any accountant can develop those factors to make him personally ready to exploit an opportunity as an entrepreneur. Further, having a proper entrepreneur- focused education system with a supportive culture enables more professionals to enter the entrepreneurial field. This research has reinforced the researchers' commitment to assist more employed engineers and accountants to become entrepreneurial engineers and accountants in small businesses in Sri Lanka.

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Disaster Risk Management and Resilience: What Remains Untouched?

Nadeera Ahangama and Raj Prasanna

Abstract

The contemporary generation of Disaster Risk Management (DRM) scholars is increasingly contributing to the ongoing debate on applying resilience in theory and practice. Nevertheless, the theoretical foundations of resilience in the DRM context have not yet been sufficiently validated on empirical grounds. This paper produces a review of literature on the DRM and Resilience concept and recognizes unanswered questions in the body of disaster management and resilience literature. There are several theoretical and empirical research gaps recognized and several future research implications are suggested, in particular, of how disaster resilience is achieved in a multi-stakeholder environment, and how to frame the bounce forward concept in disaster. In order to add value to the context, this paper also elaborates on the research gaps specific to Sri Lanka.

Keywords: bounce forward, disasters, disaster risk management, literature review, resilience

Introduction

Even after several decades of scientific research advancement, human beings are still confronted by the rising rate of the devastating impact of natural disasters. However, most national disaster management policies and practices are still centred on the ‘loss reduction model’, which let communities remain vulnerable to natural disasters (Bhandari et al. 2010). After the United Nations presented the Hyogo Framework for Action (UNISDR 2005), most research in the area of disaster management has shifted from the ‘loss reduction’ paradigm to resilience based on disaster management systems (Bhandari et al. 2010, Norris et al. 2008, Aldunce et al. 2014, Klein et al. 2003). While old thinking of “loss reduction” attempts to just prevent damage, resilience focuses on building strong communities that are able to survive

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a disaster and rebound from the impact in a shorter period of time. The concept of resilience is emerging as a paradigm that assists in developing disaster risk management strategies but several research gaps are still evident in this field.

The objective of this paper is to do a comprehensive literature review on disaster risk management, the resilience concept and an amalgamation of the two. First, the paper recognizes current research directions in Disaster Risk Management (DRM), and what areas still require further research. As explained earlier, resilience is a prominent research theme that requires better explanation. Yet a unique definition is required for resilience, particularly in the field of disaster management (Manyena 2006, Cutter et al. 2008, Brand & Jax 2007, Heazle et al. 2013). Hence, this paper attempts to arrive at a working definition of disaster resilience, followed by recognizing research gaps in the amalgamation of DRM and resilience in the global and Sri Lankan context. It contributes to filling the gap in the literature in using resilience from disaster management perspectives and suggests future research directions.

Defining Disaster Risk Management

Definitions of disasters in the literature are centred on a few common key aspects. Most disaster scholars recognize a disaster as an 'event' or 'state' which exceeds the capabilities of natural processes (Quarantelli 1988,1998, 2000, Stark & Erickson 1978, Dorasamy et al. 2013). 'Disaster is a crisis situation that far exceeds the capabilities' states Quarantelli (1988, p. 18). Further, Quarantelli recognizes a disaster as an event in which emergency organizations need to expand and extend themselves in order to cope with the vulnerabilities that arise. Stark and Erickson (1978) explain that a disastrous event has a distinct beginning and a distinct end, resulting from an extraordinary freak of nature, a perversion of the natural processes of life. On the other hand, scholars commonly recognize two inherent properties of a disaster: first, it does a great deal of harm, second, it is sudden, unexpected, acute (Stark & Erickson 1978, Dorasamy et al. 2013). Dorasamy and the group recognized the following attributes of a disaster: its sudden occurrence, need for quick reactions, the nature of uncertainty, nature of stress, threats to the reputation of organizations, and escalation of intensity.

The World Health Organization (WHO 2002) defined a disaster as 'an occurrence disrupting the normal conditions of existence and causing a level of suffering that exceeds the capacity of adjustment of the affected community'. The United Nations Office for Disaster Risk Reduction (UNISDR 2007) defined disaster as:

... A serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses that exceed the ability of the affected community or society to cope using its own resources...

The DRM of man-made disasters and natural disasters has become a prominent theme for research in both the natural and social sciences (Lettieri et al. 2009, Ikeda & Nagasaka 2011, Scolobig et al. 2015). UNISDR (2007) and the Disaster Management Centre (DMC), Sri Lanka (2005, p. 7) defined DRM as

...The systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster...

The next section reviews a collection of DRM literature in order to recognize the research gaps that exist.

Perceptible Gaps in Disaster Management Literature

Recent DRM research published from 2010 to 2015 (retrieved from online research databases Emerald insight, Springer, Palgrave Macmillan, Science Direct, and Ebsco Host for the keyword 'Disaster Risk Management') is categorized into a few common research themes (Table 1): Decentralization of DRM institutes; Disaster Resilience; Methods, Practices, and Management; Policy and Law; Information Technology Tools for Disaster Management; Instruments to Assess and Indexes; Community Perceptions and Economics.

Decentralization of DRM institutes (Scolobig et al. 2015, Ainuddin et al. 2013, Aldunce et al. 2015, Dixit et al. 2013, Kusumasari et al. 2010, Becker 2012, Ainuddin & Routray 2012) is a commonly discussed research subject in recent years. Scolobig et al. (2015) examined the transfer of DRM responsibility from the agencies in charge to private citizens, Ainuddin et al. (2012, 2013) researched on engagement and coordination among top-down institutional arrangements, Dixit (2013) developed on the initiatives adopted by both governmental and nongovernmental organizations, whereas Kusumasari et al. (2010) and Becker (2012) researched on different local government and other administrative stakeholders' involvement. Many researchers have demonstrated an interest in and recognized the importance of decentralization of DRM institutes, which indicate a recent trend in DRM studies. However, though decentralization of disaster management activities is suggested to be handled by several stakeholders that belong to the bottom-up ladder of the administrative and operational

hierarchy, most recent research discussions are limited to practical implications rather than theoretical developments. For example, some research done in this respect is limited to how government and non-government multi-level key stakeholders operated during specific disaster events such as the Kashmir 2005 earthquake (Ainuddin & Routray 2012, Becker 2012, Ainuddin et al. 2013), and the Kathmandu earthquake (Dixit et al. 2013). Hence, more theoretical developments are required to explain the local context in order to understand the holistic framework of DRM among multilevel stakeholders.

Table 1: Research Published (2010 - 2015) in Disaster Risk Management Discipline

Theme	Research Area	Authors
Decentralization of DRM institutes	Adoption of people-centred approaches, for transfer of DRM responsibility from the agencies to citizens.	(Scolobig et al. 2015)
	The decentralization of the disaster management institutions.	(Ainuddin et al. 2013)
	Practitioners' engagement in top-down formal institutional arrangements.	(Aldunce et al. 2015)
	Initiatives adopted by both governmental and nongovernmental organizations of Nepal to manage earthquake disaster risks.	(Dixit et al. 2013)
	Capability requirements of local government institutions in pre-, during, and post-disaster activities.	(Kusumasari et al. 2010)
	The potential for discrepancies between stakeholders at different administrative levels in Fiji.	(Becker 2012)
	Improving coordination between provincial and national agencies during disasters and seismic emergencies.	(Ainuddin & Routray 2012)
Disaster Resilience	Suggesting a conceptual framework for examining multiple interpretations of resilience in DRM.	(MacAskill & Guthrie 2014)
	Practitioners' engagement in the disaster resilience discourse associated with top-down formal institutional arrangements.	(Aldunce et al. 2015)
	Investigate how resilience is framed by researchers and DRM practitioners.	(Aldunce et al. 2014) (Folke et al. 2010)
	Practical guidance methodologies for assessing resilience.	(Sudmeier-Rieux et al. 2013)
	Posits that resilience should be viewed as the ability to "bounce forward" rather than "bounce back".	(Manyena et al. 2011) (Houston 2014)
	Systematically analyze the concept of resilience using an integrated review of literature.	(Garcia-Dia et al. 2013) (Bhamra et al. 2011)
	Enhance the understanding of the multidimensional nature of resilience for measuring disaster resilience at sub-national levels.	(Burton 2012)
	Development of a preliminary conceptual framework for assessing community resilience.	(Longstaff et al. 2010)

Theme	Research Area	Authors
Methods, Practices, and Management	An inquiry into practical solutions in the field of emergent disaster, rescue methods and prevention management.	(Chou & Chen 2013)
	A greater focus on preparedness through pre-disaster planning for a more holistic approach to disaster management.	(O'Brien et al. 2010)
	Scope for improvement in planning and training, for both actors and disaster victims, in the front line of disaster management in Malaysia	(Roosli & O'Brien 2011)
Policy and Law	DRM law support for vulnerable people.	(Vink & Takeuchi 2013)
	Disaster risk and disaster management policies and practices in Pakistan.	(Ahmed 2013)
	Policy suggestions for integrating risk management and increasing risk reduction measures and planning in Mexico.	(Saldana-Zorrilla 2015)
	Explore the ethics of disaster management.	(Geale 2012)
IT tools for disaster management	Earth observation, web-based and mobile data management tools, for disaster risk management.	(Dyke et al. 2011)
	Role of an information management system for disaster management planning.	(Islam & Chik 2011)
Instruments to assess and Indexes	Qualitative instrument for assessing institutional capacity for early warning and disaster management.	(Fakhrudin & Chivakidakarn 2014)
	Evaluation index of highway flood disaster risk.	(Ou-Yang et al. 2015)
	A methodology for disaster risk management officials to assess the total disaster risk posed.	(Coetzee & Van Niekerk 2013)
Community Perceptions	Hazard and risk perception of communities.	(Manen 2014)
Economy	Extended framework for the analysis of economic effects of natural disaster risk management.	(Chen et al. 2012)
	Understand, manage and reduce the financial and fiscal impacts of natural disasters.	(Courbage & Mahul 2013)

There is a growing interest in studying the importance of decentralization of disaster management among various government agencies and other stakeholders in recent DRM research (Scolobig et al. 2015, Ainuddin et al. 2013, Ainuddin & Routray 2012, Aldunce et al. 2015, Dixit et al. 2013, Kusumasari et al. 2010, Becker 2012). Ainuddin et al. (2013) underscored that decentralization of disaster institutions reacted more positively in disaster responses than centralized disaster management procedures. Though most researchers have recognized the importance of decentralized procedures of disaster management from local grassroots level up to the different administrative agency levels in the hierarchy, their researches were limited either to a few specific administrative levels or to very general categories of stakeholders (e.g., sub-national levels (Aldunce et al. 2015, Saldana-Zorrilla 2015), governmental and non-governmental organizations (Dixit et al. 2013), local

and government institutions (Kusumasari et al. 2010, Ahmed 2013), private and public institutions (Desai et al. 2014), and rural district councils (Manyena 2006)). Only a handful of researchers (Becker 2012, Obrist et al. 2010, Ainuddin & Routray 2012) have considered the contribution of top-bottom multi-level stakeholders to national disaster management.

Lindell (2013) highlighted that disaster literature had not maintained a balance between theoretical and practical sense. The majority of journal papers published between 2010 and 2015 has a practical rather than a theoretical significance (Dixit et al. 2013, Saldana-Zorrilla 2015, Ou-Yang et al. 2015, Courbage & Mahul 2013, Fakhruddin & Chivakidakarn 2014, Aldunce et al. 2015, Dyke et al. 2011, Ahmed 2013, Vink & Takeuchi 2013, Ainuddin et al. 2013, van Manen 2014, Scolobig et al. 2015). Of them, very few papers such as the ones by Chen et al.(2012) and MacAskill and Guthrie (2014) have addressed theoretical aspects of disaster risk management. This is a clear indication of the absence of literature theorizing disaster risk management. On the other hand, Palliyaguru et al. (2014, p.45) argued that, though research on theoretical constructs has a positive effect on understanding the disaster phenomenon, ‘the disaster risk management process becomes less effective if theory and practice are set apart from one another’. In their recent book, Lopez-Carresi et al. (2013) recognized that the gap between theory and practice among academia and practitioners in the field of disaster management still exists.

Many practitioners as well as theorists have commonly recognized the new face of DRM research, namely, ‘resilience’, and it has become a key area of DRM focus in recent years (Burton 2012, Heazle et al. 2013, MacAskill & Guthrie 2014, Manyena 2006, Mayunga 2007, Sudmeier-Rieux et al. 2013, Aldunce et al. 2015, Norris et al. 2008, Aldunce et al. 2014, Klein et al. 2003, Aldrich 2011). Despite its prominence and acceptability as a key global policy of practice (Hyogo Framework for Action 2005 by the United Nations) (UNISDR 2005), many researchers believe that the resilience concept still requires theoretical and practical development. For example, Mayunga (2007) recognized that there is limited theoretical understanding of the resilience concept. Bhamra et al. (2011) argued that for the resilience theory to create value in the real world, more real world-based empirical research needs to be done to validate the theoretical constructs. Brown (2011) also contended that resilience theory is limited in conceptualization while ambiguity remains in regard to its applicability within the practice of DRM. MacAskill and Guthrie (2014) reasoned that as a guiding principle, the resilience concept is context-dependent and still needs elucidation. Hence, it is necessary to clarify how DRM and resilience concepts are practically operationalized and how theoretical understanding helps to bring balance in the literature.

DRM research published between 2010 and 2015 (Table 2) indicate variations in maturity of research themes. For instance, methods, practices, and management themes of disaster researches reveal maturity in their area and discussion is more narrowed down, precise and clear-cut in research topics like disaster rescue methods (Chou & Chen 2013), pre-disaster planning for a holistic approach (O'Brien et al. 2010), and improvement in planning and training (Roosli & O'Brien 2011). Policy, law, instruments of assessment, indices and research themes also signify the maturity of the research area. For example, policy development in specific regions (Ahmed 2013, Saldana-Zorrilla 2015), ethics of disaster management (Geale 2012), indices and assessment to evaluate disaster capacity and risk (Fakhruddin & Chivakidakarn 2014, Ou-Yang et al. 2015, Coetzee & Van Niekerk 2013), and economic effects (Chen et al. 2012, Courbage & Mahul 2013). In contrast, most resilience research is still looking at how to frame or define the concept of disaster resilience, for example, framing resilience (MacAskill & Guthrie 2014, Aldunce et al. 2014, Folke et al. 2010, Manyena et al. 2011, Houston 2014, Garcia-Dia et al. 2013, Bhamra et al. 2011), forming of resilience frameworks (Longstaff et al. 2010), and practical guidance methodologies for assessing resilience (Sudmeier-Rieux et al. 2013) etc. Hence, this indicates a need for more in-depth research to establish the resilience concept in disaster management and further research on conceptualization of a multi-institutional disaster resilience framework, especially in the local need for a holistic framework for building national disaster resilience. On the other hand, the concept of resilience had a presence in the research arena for several decades, but the definition remains contested in literature (Manyena 2006, Cutter et al. 2008, Brand & Jax 2007, Heazle et al. 2013). Irrespective of the roots of the resilience, Norris et al. (2008) argued that the resilience concept is applied in various fields and have multiple definitions. Few researchers have illustrated the evolution of the resilience concept and outlined the diversity of definitions in various disciplines in recent years (Aldunce et al. 2014, Norris et al. 2008, Bhamra et al. 2011, Garcia-Dia et al. 2013). Still a disaster resilience definition requires refining. The next section, attempts to arrive at a working definition of disaster resilience.

Defining Disaster Resilience

Most definitions of resilience commonly include the following themes: ability to bounce back (Norris et al. 2008, Paton et al. 2001), without being deformed (Gordon 1980), the speed at which the system returns to normalcy after a hazard (Bodin & Wiman 2004), measure of the ability to absorb the change (Holling 1973), continue existence/persistence (Holling 1973, Longstaff 2005), strengthen community bonds, resources and the community's capacity to cope (Chenoweth & Stehlik 2001), to take meaningful, deliberate, collective action to minimize the impact (Pfefferbaum et al. 2007), and find unknown inner strengths and

resources (Ganor & Ben-Lavy, 2003). Pfefferbaum et al (2007) believed that resilience is better conceptualized as an ability or process.

Resilience definitions in the ecological literature are of two kinds both of which reflect the stability of systems (Gunderson 2000). Holling (1973) argued that the behaviour of ecological systems could be explained using two dissimilar properties: resilience and stability. The pioneering work of Holling (1973, p.17) in resilience in ecosystems defined resilience as ‘the persistence of relationships within a system and is a measure of the ability of these systems to absorb changes of state variables, driving variables, and parameters, and still persist.’ On the other hand, Holling (p. 17) characterized stability as persistence of a system near or close to an equilibrium state (Gunderson 2000, Ives 1995). This indicates that stability is the ‘ability of a system to return to an equilibrium state after a temporary disturbance’ (Holling 1973, p. 17). Hence, a measure of resilience is how far the system has moved from equilibrium (in time) and how quickly it returns (ibid). Some scholars in the field of physics field defined resilience as ‘the ability to store strain energy and deflect elastically under a load without breaking or being deformed (Gordon 1980 cited in Aldunce et al 2014). In contrast to this view, engineering literature indicates resilience as the behaviour of dynamic systems far from equilibrium, and it is measured by the return time as a measure of stability (Holling 1973, Gunderson 2000). Holling (1973) called this ‘engineering resilience’.

As Gunderson (2000, p.435) further explained, the return time definition evolved from engineering traditions, i.e., in the engineering system perspective, ‘return time to a single, global equilibrium’. However, ecological resilience is postulated in the existence of multiple equilibriums or multiple stable states which facilitate transition among stable states (Holling 1973, Gunderson 2000). Hence, ecological resilience is seen as the width or limit of a stability domain and is defined by the magnitude of disturbance that a system can absorb before it redefines system structure by changing its stable states through modifying variables and processes that can control behaviour (Holling 1973, Gunderson 2000, Ludwig et al. 1997). Additionally, Gunderson (2000) believed that the processes that contribute to system ‘memory’ of those involved could restore ecological resilience. Other fields of study which embrace the concept of resilience are psychology, community studies, and disaster management. Table 2 gives a list of selected resilience definitions in various disciplines from 2000 to 2014.

Transversely, these definitions have little general consensus. First, resilience is recognized as a process rather than an outcome (Gunderson 2000, Pfefferbaum et al. 2007, Norris et al. 2008, Besser 2013, Houston et al. 2014). Secondly, resilience is defined as the capacity or

ability to absorb disturbances and/or bounce back/return from adverse situations to normalcy (Gunderson 2000, Paton et al. 2001, Klein et al. 2003, Walker et al. 2004, Folke et al. 2010, Longstaff et al. 2010, Garcia-Dia et al. 2013). Thirdly, resilience is better theorized as adaptability than as stability. At the start of the time line from year 2000, Gunderson (2000) recognized resilience as the level of stability of a system which can absorb disturbances. However, most later definitions conceptualize resilience as adaptability or capacity to cope (Chenoweth & Stehlik 2001, Ganor & Ben-Lavy 2003, Pfefferbaum et al. 2007, Norris et al. 2008, Houston et al. 2014).

Table 2: Some Recent Definitions of Resilience (Year 2000 - 2015)

Field	Author(s)	Definition
Ecology A	(Gunderson 2000)	Width or limit of a stability domain and defined by the magnitude of disturbance that a system can absorb before it redefines system structure by changing its stable states through modifying variables and processes that can control behaviour.
Community Studies C	(Chenoweth & Stehlik 2001)	Communities can be considered as being resilient when they respond to crises in ways that strengthen community bonds, resources and the community's capacity to cope.
Disaster Management D	(Paton et al. 2001)	The capability to bounce back and to use physical and economic resources effectively to aid recovery following exposure to hazards
Disaster Management D	(Klein et al. 2003)	Resilience is the amount of disturbance a system can absorb and still remain within the same state or domain of attraction and the degree to which the system is capable of self- organization.
Community Studies and Disaster Management D	(Ganor & Ben-Lavy 2003)	'The ability of individuals and communities to deal with a state of continuous, long term stress; the ability to find unknown inner strengths and resources in order to cope effectively; the measure of adaptation and flexibility' (p. 106)
Ecology and Engineering A, B	(Bodin & Wiman 2004)	'The dynamic behaviour of the system as it strives (if at all) to return to equilibrium, i.e., the extent to which and the speed with which return occurs' (p. 34) *Bodin & Wiman believed that one ought to get back to the original definitions of stability and diversity in mathematics into ecology.
Ecology A	(Walker et al. 2004) (Folke et al. 2010)	'Resilience is the capacity of a system to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, identity, and feedback - in other words, stay in the same basin of attraction.' (p. 11)
Psychiatrics C	(Pfefferbaum et al. 2007)	The ability of community members to take meaningful, deliberate, collective action to remedy the impact of a problem, including the ability to interpret the environment, intervene, and move on.
Community Studies C	(Norris et al. 2008)	'A process linking a set of adaptive capacities to a positive trajectory of functioning and adaptation after a disturbance' (p. 130)
Community Studies C	(Longstaff et al. 2010)	'The capacity of a system to absorb disturbance, undergo change, and retain the same essential functions, structure, identity, and feedback' (p. 3)

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Field	Author(s)	Definition
Community Studies C	(Besser 2013)	Resilient communities are ‘ those that maintain or enhance residents’ quality of life following a shock’ (p. 117)
Psychiatrics C	(Garcia-Dia et al. 2013)	Resilience is one’s ability to bounce back or recover from adversity’ (p.267)
Community Studies and Disaster Management D	(Houston et al. 2014)	‘A community is resilient if it is able to “bounce forward” after an adverse event. Community resilience is generally considered a process that is indicated by community adaptation following a disaster or crisis.’ (p. 270)

While the engineering field defined resilience in the temporal domain (categorized as type B in Table 2), i.e., the speed at which the system arrives at the equilibrium after a disturbance occurs (Bodin & Wiman 2004), the field of ecology views resilience mostly in the spatial domain (categorized as Type A in Table 2). Scholars from the ecology field defined resilience as the extent to which a system can absorb disturbances (Gunderson 2000, Walker et al. 2004, Folke et al. 2010). In ecological settings, resilience has been used interchangeably in conjunction with the concept of ‘adaptation’ of climate studies (Joerin et al. 2014). In contrast, community studies and psychiatrics have suggested more social and/or psychological aspects in resilience while building on the capacity to adopt/cope as in ecological definitions (Chenoweth & Stehlik 2001, Ganor & Ben-Lavy 2003, Longstaff et al. 2010, Besser 2013) (categorized as Type C in Table 2).

On the other hand, resilience definitions in the field of disaster management closely coincide with definitions in community studies because disaster management studies are also specific about the capacity to adopt/cope (categorized as Type D in Table 2). For example, Chenoweth and Stehlik (2001) recognized resilience as the community’s capacity to cope when responding to crises. Chenoweth and Stehlik are also specific about the ways in which resilience shall be enforced, i.e., strengthening community bonds and resources. Other disaster management scholars have suggested the following aspects in their definitions: efficient use of physical and economic resources (Paton et al. 2001, Ganor & Ben-Lavy 2003), ability to self-organize (Klein et al. 2003), ability to find unknown inner strengths (Ganor & Ben-Lavy 2003), and maintain or enhance residents’ quality of life (Besser 2013).

While early researchers theorized resilience as ‘bounce back’ (Gordon 1980, Paton et al. 2001, Bodin & Wiman 2004, Tugade & Fredrickson 2004, Garcia-Dia et al. 2013), some recent research defines resilience as ‘bounce forward’ ability (Manyena et al. 2011, Houston et al. 2014). As Manyena et al. (2011, p. 243) stated, resilience as ‘the notion of bounce

forward is to see disaster as an opportunity for local livelihood enhancement rather than as a simple return to the status quo ante'. As they further describe, resilience should be perceived as the ability to 'bounce forward' and 'move on' following a disaster rather than 'bounce back' and move to community status before the occurrence of disaster. Taking several examples, such as how Japan's 2011 earthquake and the subsequent tsunami and total destruction of the Fukushima nuclear power plant led other countries to rethink their power-generation strategies, Manyena et al (2011) suggested that resilience is not simply 'bounce back' but 'bounce forward', considering that a disaster as an opportunity to change. Paton and Johnston (2006) highlighted the gaps in the existing resilience definitions with the concept of 'bounce back'. As they further explained, 'bouncing back' does not portray the changed reality and new opportunities formed due to a disaster. Such change assists in pre-disaster planning by adjusting to new post-disaster realities (Manyena et al. 2011). Explaining further, Paton and Johnson (2006) explained that even though affected community wants to return to the previous state, changes to the physical, social and psychological reality make bounce back unfeasible. Hence, this paper defines disaster resilience as **'the capacity of a system to adopt to the adversity of a disaster and bounce forward strengthening community bonds, and resources'**. The next section recognizes the research gaps in the amalgamation of DRM and resilience.

Disaster Risk Management and Resilience: What is unanswered?

MacAskill and Guthrie (2014, p. 667) stated that resilience has 'emerged as a guiding principle' in DRM. However, there are several unanswered queries relating to disaster management and resilience and the link between them. Lettieri et al. (2009) pointed out that most literature on disaster management theory commonly agrees on a common theoretical framework which is independent of the type of disaster. However, most such frameworks focus on technical issues and neglect the contributions from the organizational and psychological fields, thus leading to difficulties in making these frameworks actionable (Lettieri et al. 2009). Though termed differently, most literature commonly agree that a systematic disaster management process framework has three temporal and logical stages: pre-disaster, response, and post-disaster (Todd & Todd 2011, Lettieri et al. 2009, Lindell 2013, Mansor et al. 2004). These phases do not have global acceptance and their functions are not mutually exclusive and such functions may overlap in the temporal and logical space (Lindell 2013). This obviously would make recognition of the importance of resilience in disaster management problematic. As MacAskill and Guthrie (2014, p. 673) explained, this ambiguity 'is likely to be a factor as to why there are differences between academic or theoretical conceptions of resilience and application of the concept in practice'. Also, there is no research evidence to explain

how resilience is operationalized in each stage of the disaster management cycle. Hence, it indicates that scholarly work done so far has paid little attention to explaining how to embed the process of resilience in the disaster management cycle.

Another common research gap which many researchers have recognized is the absence of empirical validation of different aspects of resilience theory. For example, Bhamra et al. (2011, p. 5388) pointed out that ‘there appears to be a strong focus around building theories and definitions of resilience’, but there are very little empirical research done to understand how organisations can attain resilience in the face of disasters. Sudmeier-Rieux et al. (2013) also recognized that there is an empirical limitation in practical guidance methodologies for assessing resilience. Brown (2011) argued that though DRM practitioners and policy makers frequently include the concept of resilience in policy documents, such inclusions are not based on theoretical or empirical groundings. Manyena et al. (2011) and Paton and Johnson (2006) suggested that disaster resilience is associated with bouncing forward rather than bouncing back. Empirical evidence of resilience as a bouncing forward process is significantly limited. Janssen et al. (2006) argued that comparing case studies on resilience assessment of regional social-ecological systems is difficult because they do not follow the guidance of a resilience framework on structural changes. The next section throws light on research evidence and gaps that can be especially found in the Sri Lankan context.

Disaster Risk Management and Resilience from the Lens of Sri Lanka

The widespread disaster caused by the Tsunami (2004) in Sri Lanka reconfirmed the crucial requirement of ‘multi-sectorial, inter-institutional, and multi-disciplinary’ mechanisms to handle disasters in the country (Disaster Management Centre, 2005). On these grounds several interim committees, legislative (Sri Lanka Disaster Management Act No. 13 of 2005) and institutional arrangements (DMC-Disaster Management Centre, MODM-Ministry of Disaster Management) were established. In parallel to this development, scholars have been increasingly contributing to DRM and resilience literature in recent years.

The research done in the context of Sri Lanka is developed in three knowledge domains: disaster mitigation and preparedness (Jayamanna 2008, Mudalige 2011, Yoshitani et al. 2007, Wickramaratne et al. 2012, Minamoto 2010); DRM plans and policies (Ranasinghe 2011); and disaster resilience (Senanayake & Barthelot 2013, Somasundaram & Sivayokan 2013, Hettiarachchi et al. 2014, Malalgoda et al. 2013, Pathirage et al. 2012, Ingrige et al. 2008, Thanurjan & Seneviratne 2009).

Several researchers focused their work on disaster mitigation and preparedness. For example, Jayamanna (2008) provided a case study on flood mitigation and preparedness in the Kalutara Urban Council area, illustrating the significance of actions by various stakeholders including community members. Mudalige (2011) explored the flood management systems in Sri Lanka and recognized that Sri Lanka still lacked a real time flood early warning system (Yoshitani et al. 2007). Yoshitani et al. (2007) also focused on Sri Lanka's natural and social characteristics and risks associated with water-related disasters. Wickramaratne et al. (2012) proposed a methodology for a priori classification of natural disasters that occur in Sri Lanka to support preparing mitigation plans. A survey of 187 households in eastern Sri Lanka that suffered from the 2004 Indian Ocean tsunami recognized that linking social capital between survivors and national and international nongovernmental organizations (NGOs) was critical in rebuilding (Minamoto (2010). Most research on disaster preparedness and mitigation in Sri Lanka is based on a single location. A cross-sectional view and comparison between locations would add strength to explaining disaster preparedness and mitigation in Sri Lanka. Also, there is no sufficient research to assess or evaluate current DRM mitigation plans within Sri Lanka.

Only a few researches have focused on DMR plans and policies in Sri Lanka. Ranasinghe (2011) provided plausible suggestions to mainstream disaster risk reduction in policies, programmes and plans in Sri Lanka to build resilient cities. She suggested zoning of the areas according to the land capability, conservation, having building codes, having green belts, green lungs in cities, installation of early warning systems, and improving disaster awareness among the community as imperative for resilience in cities. However, it is noted that most DRM plans and policies are still focused on loss reduction models. Still the concept of resilience has not been included in DRM policy research.

A growing interest is seen among scholars to contribute to empirical literature on disaster resilience knowledge in Sri Lanka. For example, Senanayake and Barthelot (2013) focused on the use of children as change agents to collect and disseminate grass root level flood information using participatory flood mapping techniques and improve the awareness of the community on flood resilience in Batticaloa city, Sri Lanka. They suggested that children acted as change agents within the system to facilitate bottom-up as well as top-bottom information flows in the neighborhood. Ingirige et al. (2008) focused on how knowledge transfer impacts the effective and efficient delivery of post-tsunami housing in Sri Lanka. They found that knowledge transfer within this context requires knowledge localization. Therefore, Ingirige et al. (2008) suggested community engagement through participatory techniques among various stakeholders for innovation. Thanurjan and Seneviratne (2009) examined the degree to which

knowledge management is used in post-disaster housing reconstruction in Sri Lanka. Their study revealed that organizations use competences and repositories as the main sources of knowledge, internal and external to the organization. Somasundaram and Sivayokan (2013) focused their research on understanding common psychosocial problems faced by families and communities in the context of rebuilding community resilience in post-war times. Since community members were significantly affected by post trauma experiences, they suggested the use of cultural practices and awareness programmes to revitalize resilience. A joint case study presented by the University of Salford and DMC Sri Lanka (2012) focused on providing a snapshot of local level resilience building activities associated with the city of Batticaloa. The case study identified trends in the perceptions and approaches of local governments toward disaster risk reduction. Hettiarachchi et al. (2014) studied the nature and extent of degradation in a selected segment of the Colombo Flood Detention Area (CFDA) wetlands and disaster resilience. They analyzed the gradual process of change in watersheds and the wetland ecology affecting flood control services. It was found that gradual ecological change in this area leads to a significant reduction in the water-holding capacity of the wetlands, thus increasing the frequency of floods.

A handful of researchers promoted literature connecting knowledge transfer and disaster resilience in the context of Sri Lanka. For example, Malalgoda et al (2013) explored the role and challenges for Sri Lankan local governments in creating a disaster-resilient built-environment within Batticaloa city of Sri Lanka. Their study revealed that local governments are facing a considerable challenge due to the lack of knowledge of disaster risks and vulnerabilities. Hence, further research in this area is highly recommended in the local context. Even though the resilient concept is not directly addressed, Pathirage et al (2012) examined key knowledge factors related to the disaster management cycle and explored the challenges associated with them. However, these researches have not managed to build sufficient empirical evidence of how knowledge can be efficiently transferred to develop disaster resilience longitudinally. Also, most of researches of the above scholars in the local ground consider resilience as a part of DRM, but there has been very little focus on the theoretical development of resilience.

Conclusion

In conclusion, the authors suggest several future research directions blending DRM and resilience. There is a theoretical and empirical gap in how disaster resilience is achieved in a multi-stakeholder environment. In particular, the Disaster Management Centre in Sri Lanka has formalized a multi-stakeholder framework for DRM. However, that initiative has

not yet been completely assessed theoretically or practically and also the resilience concept is hardly embedded in it. This indicates that resilience studies should be further directed to study how structural components (nodes and links) are arranged over time and how various network characteristics such as connectivity and centrality operate in dynamic situations. Another research gap in the DRM literature is the imbalance between the theoretical and practical sense. The majority of DRM literature is practical-based and little importance is given to theoretical developments. On the other hand, the resilience concept still requires theoretical as well as practical development. Resilience still appears to be at an initial stage where researchers still attempt to frame it in a DRM context. Hence, this indicates a need for more in-depth research to establish the resilience concept for conceptualization of a multi-institutional disaster resilience framework, especially in the local need for a holistic framework for building national disaster resilience. Another area that needs further research is the concept of 'bounce forward'. Most recent research is limited to evaluating empirical grounds for 'bouncing back'. But further research should be conducted to understand how a disaster functions as an opportunity for change and further improvement. Another research gap is the absence of research evidence to explain how resilience is operationalized in each stage of the disaster management cycle. So, further research is needed to explain how to embed the process of resilience in the disaster management cycle.

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Top Manager Orientation, Management Accounting Systems and Strategy Implementation: Evidence from the Sri Lankan Manufacturing Sector

Dinushi Wijesinghe and Dileepa Samudrage

Abstract

This paper examines how technically oriented top managers use Management Accounting Systems (MASs) for organizational strategy implementation in the Sri Lankan manufacturing sector. Based on the Upper Echelon Theory (UET), the researchers argue that technically oriented top managers use MASs more interactively than diagnostically and prefer the use of innovative to traditional MAS information. Further, the researchers argue that technically oriented top managers support the implementation of prospector strategy as a result of their innovativeness. In order to achieve the objectives of the study a quantitative based approach was adopted. The hypotheses were developed and tested in a survey among the technically oriented top managers in the manufacturing sector in Sri Lanka. The researchers conducted a few in-depth interviews as well. The findings of the study confirmed that the technically oriented top managers prefer the interactive style in the use of MASs and also prefer to use innovative MAS information. The results also confirmed that technically oriented top managers prefer to adopt the prospector strategy. Further, the findings confirmed that the interactive style of using MASs and innovative MAS information strongly supports the adoption of prospector strategy. The findings confirmed the applicability of UET in the Sri Lankan manufacturing sector. The findings will also aid business organizations in preparing MAS information to complement prospector strategy implementation. The paper contributes to the existing literature on UET and the role of MASs in supporting strategy implementation particularly in a South Asian, Sri Lankan setting.

Keywords: developing country, prospector strategy, top manager's use of MASs, Upper Echelon Theory,

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Introduction

The dynamic and evolving nature of today's business organizations has resulted in stiff competition and drives the need for achieving sustainable competitive advantage to obtain better organizational performances. They face the challenge of battling this competition and change, for their survival and growth (Chenhall et al. 2011). These rapid changes have posed a challenge to the entire business models and structures widely and rapidly. The players in the business world as a result face a situation where they have to capitalize on the new opportunities while avoiding the threats. To explore the opportunities and to avoid the threats, the organizations need to be vigilant about decision making on the development and implementation of strategies.

Decision-making with regard to strategy implementation by top managers should be based on various types of relevant information. The use of Management Accounting Systems (MASs) for decision making plays a vital role in generating important and timely information relevant to different units of the organization (Ittner and Larcker 1995).

The main goal of Management Accounting is the coordination and integration of subsidiaries and business units as well as supporting management with relevant information for rational decision making. MASs are used by management as tools of strategy implementation (Simons 1991). However, the use of MASs as a controlling tool for strategy implementation is not an easy task. Top managers responsible for running the organizations often find it difficult to clearly understand organizational strategies and their implementation. Further, they often find it difficult to convert their strategies into operational goals, to achieve them and link those measures with financial performance. Moreover, they are often faced with the challenge of adjusting the strategy implemented according to the changes in the dynamic environment and accordingly the operational goals and performance measures must be adjusted. Therefore, the development and implementation of strategy is very important and top managers have to make these decisions with care. For this purpose, MASs play a key role (Kaplan & Norton 1996, Simons 1995, Naranjo-Gill & Hartmann 2006).

Even though MASs facilitate top management with various types of information, all top managers do not process and interpret such information in the same way. Thus, knowing what factors influence these differences in the use of information is important. The Upper Echelon Theory (UET) introduced by Hambrick and Mason (1984) suggests that top managers process and interpret information differently due to various demographic characteristics and values which have an impact on their cognitive base. According to Hambrick & Masons (1984),

the cognitive base includes knowledge of assumptions about future events, knowledge of alternatives, knowledge of consequences attached to alternatives and the values of the decision maker for ordering consequences or alternatives according to preferences. This influences the strategic information they use and the different strategic choices they make.

However, despite the significant literature relevant to strategy implementation in the broader management field, there is a dearth of studies relating to the role of MASs in strategy development and its implementation process (Langfield-Smith 1997) while the findings of some of these studies are inconclusive (Abernethy & Brownell 1999, Ittner & Larcker 2001). Particularly studies done on the differences in the use of MASs and strategy implementation relating to UET are scarce and in the Sri Lankan context, the use of MASs and strategy implementation has been rarely studied (Kapu Arachchilage & Smith 2013). As far as the authors are aware, studies to assess the impact of UET on the use of MAS and strategy implementation in Sri Lanka has never been done.

Strategy implementation has been studied using different strategy typologies (Sumer & Bayraktar, 2012). Among them, the Miles and Snow strategy typology describes the organization's ways and means of adapting to different environments giving rise to a two-fold continuum of the strategy typology defender strategy and prospector strategy where defenders focus on improving the efficiency of their existing operations while prospectors always search for new market opportunities (Miles et al. 1978).

According to UET, the background of top managers can be evaluated through observable demographic characteristics such as age, functional experience (tracks), career experience, education, socio-economic roots, financial position and group characteristics. It is argued that depending on the top manager orientation, their style, type and purpose of using MASs and implementation of strategy will differ (Naranjo-Gill & Hartmann 2006, 2007, Naranjo-Gil, Maas & Hartmann 2009). Here, the authors define top manager orientation, based on UET, as professionally (technically) and administratively oriented top managers based on their education and functional experience.

The above background motivated the authors to examine the relationships that exist between top manager orientation and their use of MASs and strategy implementation in Sri Lankan organizations. Accordingly, the research question addressed was: ***“How do technically oriented top managers use Management Accounting Systems differently for strategy implementation?”*** Accordingly, three research objectives were formed: first, to identify how technically oriented top managers in Sri Lankan organizations use MASs differently;

second, to identify the relationships between the use of MASs and strategy implementation; and third, to identify the relationship between technically oriented top managers and their strategy implementation.

The remainder of this paper is structured as follows. The next section develops the conceptual framework based on the literature review encompassing the respective hypotheses about the relationships between technically oriented top managers and MASs and strategy implementation. The methodology section describes the design of the study. The data analysis section presents the results of the analysis. The final section presents the discussion, conclusions of the study and directions for future research.

Development of Conceptual Framework

Prior to developing hypotheses the Upper Echelon Theory is outlined followed by literature on technically oriented top managers' preference for the use of MASs and in relation to the strategy implementation process.

The Upper Echelon Theory (UET)

UET suggests that the strategic choices made by firms reflect the values and cognitive bases of powerful actors and as a result, the characteristics of top management or the upper echelon of an organization can influence the decisions and practices adopted by the organizations (Hambrick & Masons 1984, Nishii, Gotte, & Raver 2007, Bantel & Jackson 1989, Carpenter, Geletkanycz, & Sanders 2004). Since UET is concerned about the organization's strategic behavior, it is proposed that the managerial orientation should be analyzed at the level of the strategic apex which includes top managers of the organization (Finkelstein & Hambrick, 1996, Hambrick, 2007, Hartmann, 2005). UET emphasizes that differences between managerial orientations do not merely originate from functional responsibilities but are rooted in the cognitions, values and perceptions that are formed by education and experience (Carpenter et al. 2004, Schäffer & Steiners, 2004). For example, managers with a dominant orientation in engineering, found it difficult to climb up to the top manager positions while managers with an administrative orientation dominated top managerial positions (Armstrong 1987). Technically oriented engineers were more inclined to manage and control through the professional bureaucracy model where the standardization of skills was the main control mechanism (Abernethy & Stoelwinder 1990).

This study is designed to examine how technically oriented top managers use MASs differently for strategy implementation. The orientation of top managers is therefore one of the key constructs of the study. This was measured based on top manager education and functional experience as stated in UET (Naranjo-Gill & Hartmann 2006).

Technically Oriented Top Managers and the Use of MASs

According to UET, based on their education and experience, top managers can be classified into two categories: top managers with a dominant technical (professional) orientation and top managers with a dominant administrative orientation, (Abernethy & Stoelwinder, 1990, Naranjo-Gil & Hartmann 2006, 2007, Naranjo-Gil et al.2009, Pavlatos 2012).

Further, Hartmann, (2005) suggested that the preference for accounting-based performance indicators systematically differs from personality-related cognitive characteristics where uncertainty has stronger effects on the perceived appropriateness of accounting performance measures for managers with low tolerance for ambiguity than for managers with high tolerance for ambiguity. Top managers with a dominant technical orientation have a greater understanding of the production process, and are therefore inclined to offer more autonomy and participation to professional colleagues at lower hierarchical levels in establishing working goals (Armstrong 1987, Mintzberg 1990). Abernethy and Vagnoni (2004) showed that professional managers indeed use the accounting system to cope with role conflicts between their medical (technical) and managerial (administrative) roles. Further, these authors have suggested that the top managers with a technical orientation used MASs for communication and dialogue with their professional peers, which is used for interactive controls rather than in a traditional diagnostic cost-oriented way (Mintzberg 1990, Simons 1995, Gaidiene & Skyrius 2006).

For the purposes of this study the use of MASs is defined in two ways: style of use of MASs and use of innovative MASs. The style of using MASs was measured in terms of interactive use of MASs and diagnostic use of MASs. The use of innovative MASs was measured in terms of the use of innovative MAS information and use of traditional MAS information.

Organizations that use interactive control systems demand attention from all levels of managers, peers and subordinates and encourage organizational attention and learning. As a result, accountability, coordination, motivation and learning are integral to interactive control systems. On the other hand, organizations with diagnostic control systems mainly help managers to track the progress of individuals, departments and production facilities

towards strategically important goals which are needed to monitor the performances against the targets and adjust for any variances (Simons 1991, 2000, Schäffer & Steiners 2004).

The choice by top managers to use a system interactively or diagnostically represents an element of strategic choice (Simons 1991) and the differences in strategic choices made may be due to the demographic differences of the top managers (Hambrick & Masons 1984). Professionals are more competent and comfortable with performing the core operating tasks of the organization (Abernethy & Stoelwinder 1990). This leads technically oriented top managers to use MASs not for mere top-down control but as a device to stimulate accountability, motivation and learning which are elements of interactive controls (Simons 1991, 1995, 2000, Abernethy & Stoelwinder, 1990, Abernethy & Lillis 1995, Naranjo - Gill & Hartmann 2006). Furthermore, top managers with a technical orientation are not confident with, and are not inclined to rely on financial controls when managing the organizations (Song 1982, Finkelstein & Hambrick 1996), which require less specific knowledge and information of the basic processes, and emphasize the measurement of performance against the set targets (Baysinger & Hoskisson 1990). This is in line with a more diagnostic use of MASs (Simons 1995, 2000, Abernethy & Lillis, 1995, Naranjo-Gill & Hartmann 2006).

This gives rise to the following hypothesis:

H1: With respect to top managers, a high level of technical orientation is (a) positively related to the interactive use of MASs; (b) negatively related to diagnostic use of MASs.

The use of MASs is next studied based on the use of innovative MAS information and use of traditional MAS information. Innovation has become a compulsory element for an organization to sustain and grow in today's competitive business world. As such, to face this stiff competition successfully, the call for innovative performance and controlling measures are ever increasing. For instance, organizations that use more innovative strategies might seek innovative MAS information that would give information not only on financial but also on other non-financial aspects (Kaplan & Norton 1996, Chenhall, Kallunki, & Silvola 2011). Even though modern management accounting techniques are helpful to organizations, the use of such techniques is not common to organizations as much as traditional techniques (Naranjo-Gil et al. 2009). This may in part be explained by individual differences between managers, who ultimately decide about the firms' structural adaption, competitive moves and levels of innovation (Hambrick & Mason 1984, Finkelstein & Hambrick 1996).

The tendency to innovate is positively correlated with the education level and functional experience of top managers (Bantel & Jackson 1989). According to Hitt and Tyler (1991), strategic decision making is affected by the top managers' academic orientation and further, top managers with a technical orientation are more associated with innovations, inventions and strategic change (Wiersema & Bantel 1992) and are less focused on achieving controls and efficiencies. Further, top managers with a technical orientation are more familiar with the technical and operational process of the organization and are keen on improving the content of processes (Finkelstein & Hambrick 1996). Innovativeness in the organization is positively related to the social networking and organic culture of an organization, which includes the elements of willingness to share information and the free flow of ideas and information, joint problem solving, adapting to unanticipated change and promotion of a curiosity and seeking culture, which leads to an interactive mode of using MASs (Chenhall et al. 2011). Maher (2000) has stated that companies developing innovative manufacturing practices also appear to be developing innovative MAS practices. This background thus lets top managers with a technical orientation encourage the introduction of more innovative MASs that better suit the organization's measurement of performance. On the other hand, top managers with a technical orientation are less oriented towards improving the efficiencies of the processes via finance (Song 1982), which are elements of the traditional use of MASs.

This leads to the following hypothesis:

H2: With respect to top managers, a high level of technical orientation has a (a) positive influence on the use of innovative MASs; (b) negative influence on the use of traditional MASs.

Use of MASs for Strategy Implementation

The strategy typology introduced by Miles et al. (1978) presented a theoretical framework that managers and students of management can use to analyze an organization as an integrated and dynamic whole, a model that takes into account the interrelationship among strategy, structure and process.

The Miles and Snow strategy typology conceptualizes that an organization's position as a continuum between prospector and defender types. The defender type organization focuses on improving the efficiency of its existing operations and prospectors always work on finding new market opportunities and thus give emphasis to innovation (Miles et al. 1978, Naranjo-Gill et al. 2009).

The Miles and Snow's typology further defines prospector strategy as involving dynamism in seeking new market opportunities which they are capable of developing into new products and finding creative responses to suit customer demands requiring flexible strategies (Miles et al. 1978, Abernethy & Lillis 1995, Naranjo-Gil et al. 2009). Manufacturing flexibility refers to the firm's ability to respond to market demands by switching from one product to another through coordinated policies and actions and a willingness or capacity to offer product variations. Further, attempts to maximize differentiation on innovation leads to prospector strategy (Dent 1990, Abernethy & Lillis 1995). In prospector strategy the relevance of financial measures of manufacturing performance becomes less relevant (Brownell & Merchant 1990, Hayes 1997). In order to better face challenges through creativity and innovations, new formal control systems must be created which lead to new product line extensions, processes, and markets (Simons 1995, 2000, Ittner & Larcker 1995). As a result, effective performance measures require a shift from measures which focus on manufacturing efficiencies to measures which encourage inter-functional cooperation and adoption (Macintosh 1985). This will lead to more spontaneous contact and 'integrative liaison devices' (Abernethy & Lillis 1995, Schäffer & Steiners 2004). These co-ordination mechanisms provide a means of breaking down the functional barriers imposed by mechanistic organizational structures (Galbraith 1973).

The research suggests that more complex and proactive strategies such as prospector strategy require more advanced MASs (Naranjo-Gil et al. 2009). The reason for this is that prospector organizations need to make day-to-day decisions on a wide range of issues and therefore need timelier, less aggregated and broader information (Bouwens & Abernethy 2000). That is, the prospector firm's emphasis on the importance of customer satisfaction, new product development and flexibility is central to implementing the prospector strategy. The need to measure such aspects of the firm's performances must be integrated into the organization's MAS which increases the demand for more innovative MAS techniques (Kaplan & Norton 1996). Accordingly, the prospector strategy will be supported by the interactive use of MASs and of innovative MAS information leading to flexibility and product differentiation (Bouwens & Abernethy 2000). On the other hand, the prospectors place less emphasis on efficiency-based measures that employ highly structured and formal procedures to develop and implement strategies diagnostically (Abernethy & Lillis 1995, Bhimani & Langfield-Smith 2007, Kapu Arachchilage & Smith 2013).

Furthermore, the prospector strategy does not focus on a manufacturing technology that enables long prediction runs of standardized products using mass production technology and also on achieving cost efficiencies (Miles et al. 1978, Dent 1990). As a result, the prospectors

are less focused on traditional accounting information and employee cost techniques so as to focus on task segregation and efficiency measures (Abernethy & Lillis 1995).

Based on the above the following hypotheses are formed;

H3: Prospector strategy implementation is positively affected by (a) the interactive use of MASs, and (b) the use of innovative MAS information.

H4: Prospector strategy implementation is negatively affected by (a) the diagnostic use of MASs and (b) the use of traditional MAS information.

Technically Oriented Top Managers and Strategy Implementation

According to UET, the background of top managers has an impact on the selection of strategies in the strategy typology of Miles and Snow (Hambrick & Mason 1984, Snow and Hrebiniak, 1980, Pavlatos 2012).

The UET literature typically investigates the direct relationship between top manager composition and strategic decisions (Finkelstein & Hambrick 1996). Miles et al. (1978) suggested that the organizational leader clearly influences the mode of competition that their firm chooses to adopt and indicated that managers who talk of ‘doing things differently’ emphasized innovation which is more into ‘prospector’ strategy, while managers who focused on ‘doing things better’ emphasized cost control and efficiency which lead to following a ‘defender’ strategy.

Thomas and Ramaswamy (1996) and Song (1982) have suggested that prospector firms are mostly led by managers with backgrounds in ‘output-related functions’ such as product, research and development, etc. and are technically oriented.

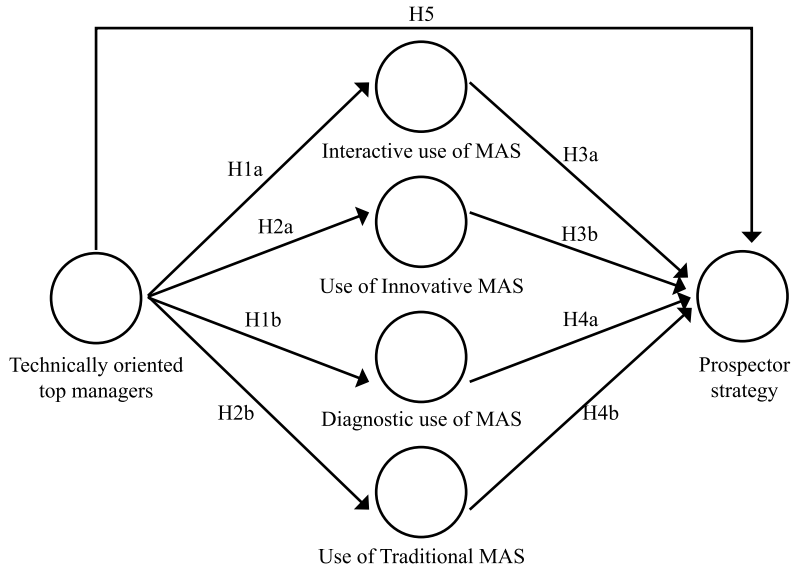
Top managers with an orientation in science and medicine (technical) were associated with innovation, invention and strategic change (Wiersema & Bantel 1992, Thomas & Ramaswamy 1996, Pavlatos 2012), which are core elements of the prospector strategy as they are more focused on ‘doing things differently’.

These facts led to the formation of the last hypothesis of the study:

H5: With respect to top managers, a high level of technical orientation is positively related to the implementation of prospector strategy.

The overall model containing the hypotheses is depicted in Figure 1.

Figure 1: The Conceptual Framework



Source: Construction by authors

Methodology

In order to achieve the objectives of the study, the researchers adopted a quantitative-based approach. To further enrich the findings, the researchers conducted a few in-depth interviews as well so that the findings and implications of the study could be better explained and understood.

Sample Selection

To study the impact of top managers, the authors selected a sample consisting of managers with technical orientation who make use of MASs for strategy implementation in the manufacturing sector in Sri Lanka.

The manufacturing sector was selected for three main reasons. Firstly, the researchers decided to focus on a single industry, controlling for variables of no theoretical interest to the study, and thus attempting to reduce noise in measurement and analyses (Naranjo-Gil & Hartmann 2006, Finkelstein & Hambrick 1996, Bantel & Jackson 1989). Further, focusing on a single

industry is recommended by Hambrick and Mason (1984) for testing UET. Secondly, the manufacturing sector uses most of the well-known management accounting practices and it is the manufacturing sector that has given birth to most of the management accounting techniques that are being used today (Johnson & Kaplan 1991). This provides a better setting to observe the use of a variety of well-known management accounting practices. Thirdly, the manufacturing sector in Sri Lanka is currently faced with stiff market competition and change (Kapu Arachchilage & Smith 2013), which demands organizations to pursue clear strategic goals to simultaneously enhance cost efficiency and flexibility. Thus, the authors focused on the manufacturing sector in Sri Lanka to test and achieve the research objectives of the study.

The selection of top managers for the study was based on the organizational strategic apex, including top management and managers who directly report to the top management (D'Aveni & Macmillan 1990). Initially the data was collected from 180 respondents in the Sri Lankan manufacturing industry through a written questionnaire which is obtainable from the authors on request.

Thereafter, based on the administrative score developed, the top managers were classified into technical-oriented and administration-oriented (Bantel & Jackson 1989, Naranjo - Gil and Hartmann 2006, 2007, Naranjo-Gil et al. 2009). Accordingly, of 180 respondents 86 respondents were classified as technical-oriented top managers. The analysis of the study was done using the information collected from 86 technical-oriented top managers.

Data Analysis Approach

The collected data was subjected to a cleaning process. The data set was analyzed applying Partial Least Squares (PLS) using the SmartPLS software 2.0 (M3 release). The final questionnaire prepared after the pre-testing had three main sections: top manager background, use of MASs, and strategy implementation. Each construct was measured as follows using the questionnaire.

The top manager orientation was measured using factual questions relating to top managers' years of educational and functional experience in the technical (professional) field and the administrative (general management) field (Bantel & Jackson 1989, Naranjo- Gil & Hartmann 2006, 2007, Naranjo-Gil et al. 2009). Using the information relating to top manager education and experience, an ordinal variable, a ratio of top manager orientation, was developed. The ratio was calculated as the individual administrative years of education and experience of top

managers to the individual total number of years of educational and experience, both technical and administration. Based on the score obtained, the top managers were classified into top managers with technical orientation and top managers with administration orientation. That is, if the score is between 0-0.5, the orientation of the top manager is regarded as 'technical' and if the score is within 0.5-1, the orientation of the top manager is regarded as 'administrative.'

Use of MASs was defined in two ways: style of use of MASs and innovative use of MASs. The style was tested by the extent the managers use MASs interactively or diagnostically for their decision making using the concept of 'levers of controls' introduced by Simons (1995). The innovative use of MASs was measured in terms of use of innovative MAS information and use of traditional MAS information.

The top managers' use of MASs, whether it is more interactive or diagnostic, was measured using a five point Likert-type instrument developed by Abernethy and Brownell (1999) and Naranjo- Gil and Hartmann (2006). The instrument was adapted to suit the Sri Lankan manufacturing sector.

The second characteristic of MASs measured was the tendency to use traditional MAS information and innovative MAS information. This was measured using instruments developed by Naranjo-Gil et al. (2009) and Fonseka et al. (2005). The respondents were asked to rate on a five-point Likert type instrument. Strategy implementation by top managers was measured using paragraph descriptions to explain the defender and prospector strategies which are the two extremes of the strategy typology introduced by Miles et al. (1978).

The hypotheses developed were tested using Partial Least Squares (PLS). The use of PLS for the study is relevant for several reasons. Firstly, the researchers' prime objective was prediction-oriented, that is, to explore the impact or the relationship between the top managers' educational and functional experience and their use of MASs and strategy implementation, which PLS can better cater to (Chengalur-Smith, Duchessi & Gil-Garcia 2012). Secondly, this study is the first study to be conducted in Sri Lanka regarding top managers' orientation, their use of MASs and strategy implementation. Thus, it is in the early stages of theory building and testing, in which scenario many researchers have recommended the use of PLS analysis (Hair et al. 2011, Vinzi et al. 2010, Jayakody 2011). Next, as explained earlier, the data collected for the study is of a non-normal nature and also it is small in sample size which is about 86 (Chengalur-Smith et al. 2012, Hair et al. 2011). Further, the proposed model of the study involved a relatively large number of indicators, constructs and complex relationships

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where PLS analysis is recommended (Vinzi et al 2010, Jayakody 2011). Therefore, based on the above reasons, the use of PLS for the study was justified.

Data Analysis

The data analysis firstly describes the profile of the sample and descriptive data. Secondly, the data is cleaned and checked for validity and reliability. Thirdly, the data is presented and analyzed to study the impact of technically oriented top managers in the use of MASs and strategy implementation with a view to meeting the objectives of the study.

Table 1: Top Managers' Composition

		Frequency	Percent	Cumulative Percent
Top manager	Technical orientation	86	42.7	42.7
	Administration orientation	104	57.3	100.0
Total		180	100.0	

Source: Compiled by authors based on the survey data

Of the 180 top managers from whom the data was collected only 86 were classified as top managers with a technical background. The data collected from the top managers in the manufacturing industry from different sectors in the field was analyzed further. Table 2 presents the information about the different sectors in which the respondents operate.

Table 2: Sector-wise Classification of Top Managers

Sector	No. of Respondents	%
Apparel	8	9
Ceramic related products	15	17
Construction and Bitumix products	6	7
Electricals	5	6
FMCG	28	33
Other	6	7
Packing Materials, Merbok Doors	7	8
Paints, Charcoal and Batteries	5	6
Rubber related products	6	7
	86	100

Source: Compiled by authors based on the survey data

As Table 2 shows, most respondents are from the Fast Moving Consumer Goods (FMCG), Ceramic products and Apparel sectors.

Table 3: Number of Employees

Number of Employees	No. of Organizations	Cumulative Value	%
100 or less	8	8	9
100-499	45	53	62
500-999	19	72	84
1000 -2999	10	82	95
3000 -4999	2	84	98
5000 or more	2	86	100

Source: Compiled by authors based on survey data

In Table 3, the employees of the organizations to which the respondents are attached are classified so as to give an indication of the size of the organizations the respondents represent. As the Table shows, most of the respondents (75%) are from organizations with employees numbering 101-1,000.

Validity and Reliability of the Model

As is well known, each Structural Equation Model is composed of two sub-models: the measurement model and the structural model. In the measurement model the focus is on establishing the validity and reliability of the measures used to represent each construct of the measurement model (Hair et al. 2011, Vinzi et al. 2010, Jung, Wu, & Chow 2008).

Accordingly, the content validity of the indicators was measured based on the results of the indicator reliability test (Vinzi et al. 2010). Based on the results obtained the lower factor loading variables were eliminated and the rest of the variables was used for further analysis (Abhayakoon & Balathasan 2013, Hair et al. 2011, Jung et al. 2008).

The construct reliability, convergent validity and the discriminant validity of the measurement model were ensured as follows.

To ensure the construct reliability, the composite reliability and Cronbach's Alpha was used (Chengalur-Smith et al. 2012, Hair et al. 2011, Vinzi et al. 2010). A common measure to examine convergent validity is known as Average Variance Extracted (AVE) (Vinzi et

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al., 2010). The discriminant validity of the measurement model was used to ensure that a construct is more strongly related to its own measures than in any other construct (Vinzi et al., 2010). For this, the square roots of the Average Variance Extracted (AVE) were compared with the correlations among constructs. Further, factor cross loadings and their correlations were used to measure the discriminant validity of the measurement model indicators (Chengalur-Smith et al. 2012, Hair et al. 2011, Vinzi et al. 2010).

Table 4 presents the information relating to the composite scale reliability, Cronbach's Alpha and AVE measure for each construct of the measurement model.

Table 4: Reliability and Convergent Validity of Constructs

	AVE	Composite Reliability	Cronbach's Alpha
Diagnostic	0.6239	0.8687	0.8069
Innovative	0.5857	0.8489	0.7645
Interactive	0.5912	0.8516	0.7718
No. EMP	1	1	1
Prospector	1	1	1
Tech	1	1	1
Traditional	0.7399	0.8948	0.8227

Source: Compiled by authors based on survey data

Table 5: Inter-Construct Correlations

	Diagnostic	Innovative	Interactive	No. EMP	Prospector	Tech	Traditional
Diagnostic	0.6239						
Innovative	-0.1084	0.5857					
Interactive	0.0373	0.5965	0.5912				
No. EMP	0.1295	0.2699	0.2742	1.000			
Prospector	-0.3197	0.4574	0.3948	0.0064	1.000		
Tech	-0.3718	0.2831	0.1835	-0.1595	0.5334	1.000	
Traditional	0.4729	0.1137	0.1153	0.1595	-0.1907	0.3675	0.7399

** Note: Square root of AVE is given in the diagonal*

Source: Compiled by authors compiled based on the SmartPLS output

Table 6: Cross Loadings for the Measurement Model

	Diagnostic	Innovative	Interactive	No. EMP	Prospector	Tech	Traditional
@2_1_10D	0.7752	-0.0257	-0.0108	0.0836	-0.1716	-0.2418	0.336
@2_1_12I	0.2443	0.4546	0.6769	0.2182	0.1436	0.0188	0.2243
@2_1_13I	0.0292	0.5362	0.863	0.2114	0.3675	0.2099	0.0657
@2_1_14I	-0.1387	0.4566	0.7833	0.2516	0.2447	0.198	0.0369
@2_1_1D	0.8517	-0.1566	-0.015	0.1086	-0.3118	-0.441	0.4738
@2_1_4D	0.8004	-0.0863	0.0129	0.1268	-0.2932	-0.2203	0.3611
@2_1_5I	0.0694	0.3991	0.7405	0.1778	0.3933	0.0847	0.0927
@2_1_7D	0.7272	-0.0133	0.1938	0.0841	-0.1855	-0.1754	0.2565
@2_4_10I	0.0132	0.6622	0.4179	0.2166	0.2137	0.1337	0.1418
@2_4_14T	0.4519	0.0873	0.0399	0.1031	-0.2543	-0.3296	0.9021
@2_4_15T	0.3619	0.0044	0.1035	0.1253	-0.0955	-0.3162	0.8831
@2_4_16T	0.3976	0.1997	0.1648	0.1889	-0.124	-0.3009	0.7912
@2_4_1I	-0.1853	0.765	0.4583	0.2159	0.4324	0.2058	-0.0291
@2_4_3I	-0.099	0.8174	0.5387	0.1473	0.3596	0.2422	0.054
@2_4_7I	-0.0287	0.8067	0.4192	0.2488	0.3551	0.2643	0.2016
B	-0.3197	0.4574	0.3948	0.0064	1	0.5334	-0.1907
No_Emp	0.1295	0.2699	0.2742	1	0.0064	-0.1595	0.1595
Tech	-0.3718	0.2831	0.1835	-0.1595	0.5334	1	-0.3675

Source: Compiled by authors based on survey data

According to Table 4, the composite reliability and Cronbach's Alpha are well above 0.7, which suggests the construct reliability of the measurement model indicators. Furthermore, all the indicators have achieved an AVE value of well above 0.5, which ensures the convergent validity (Hair et al. 2011, Vinzi et al. 2010).

The discriminant validity which is well supported by the results of the inter-construct correlations and cross loadings is presented in Tables 5 and 6 respectively. In Table 4 the square root of AVE represented in the diagonal is higher than its column-wise and row-wise correlation values, which suggests a strong discriminant validity of measures, and this is well supported by the cross loadings which is evident in the loadings of the constructs that are higher than the loadings of the particular measure which is used for other constructs.

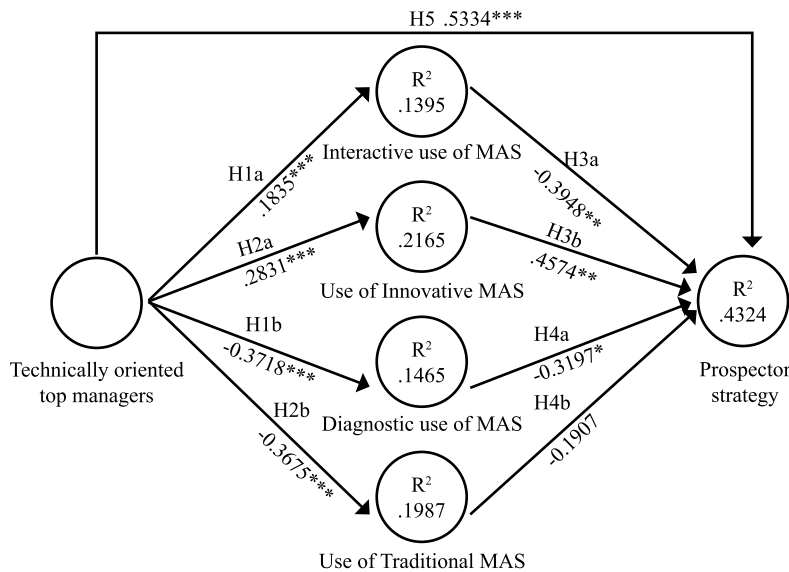
Hence, the first step of the PLS analysis, which is about establishing the measurement model validity and reliability, is completed and the results obtained, and the reliability and validity of the model are ensured.

The Structural Model

PLS provides three estimates to assess the structural model or the relationship between latent variables: path coefficient, corresponding significant score, and the coefficient determinant. The path coefficient is similar to the beta value of the traditional regression model. The significant score is determined using the t-value generated through the bootstrapping procedure in PLS. The coefficient of determination indicates the overall effect size and can be used to examine the degree of variance of the dependent variable, which is explained by the independent variables (Vinzi et al. 2010, Jayakody 2011).

The bootstrapping procedure was performed using 5,000 samples, where the use of individual sign changes was used as a sign change option (Hair et al. 2011, Vinzi et al. 2010, Jung et al. 2008) and the results of the structural model are depicted in Figure 2 and Table 7. The number of organizational employees was used in the model as the controlling variable to control the effects of organizational size.

Figure 2: Results of the Structural Model with Path Coefficients



Source: Compiled by authors based on the SmartPLS output

Organizational size was measured by the number of employees in the organization and the results suggest that there is a significant impact on the interactive use of MASs and innovative use of MASs and it does not have any influential impact on strategy implementation.

The results in Table 7 support the expected positive relationship between technically oriented top managers and the interactive use of MASs (H1a). The expected negative relationship between technically oriented top managers and the diagnostic use of MASs (H1b) is also confirmed. Support was also found for the expected relationships between technically oriented top managers and the use of innovative MAS information and use of traditional MAS information (H2a and H2b).

In the PLS analysis the researchers included a control variable with paths to all dependent variables. The results obtained are those of the model tested with the control variable. For reasons of clarity, the controlling variable is not included in the graphical presentation.

Regarding the relationships between the use of MASs and strategy implementation, Table 5 shows the support for H3a and H3b, which suggest that the use of MASs interactively and the use of innovative MAS information facilitates the implementation of prospector strategy. The results of the data analysis support H4a but do not support H4b. This suggests that the diagnostic use of MASs is negatively related to the implementation of prospector strategy while the negative relationship of use of traditional MASs has no significant impact, as the results show.

The relationship expected between the technically oriented top managers and prospector strategy implementation is also confirmed by the results obtained.

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Table 7: Results of the Structural Model for H1 To H5

	Path	Hypotheses	P.C	COD (R²)	P	S.E	T-Stat	Support
H1 a	Tech → Interactive	Top managers with a high level of technical orientation are positively related to the use of MASs interactively	0.1835	0.1395	***	0.0878	2.6569	Yes
H1 b	Tech → Diagnostic	Top managers with a high level of technical orientation are negatively related to the use of MASs diagnostically	-0.3718	0.1465	***	0.0908	3.9691	Yes
H2 a	Tech → Innovative	Top managers with a high level of technical orientation have a positive influence on the use of innovative MASs	0.2831	0.2165	***	0.0797	4.1981	Yes
H2b	Tech → Traditional	Top managers with a high level of technical orientation have a negative influence on the use of traditional MASs	-0.3675	0.1987	***	0.0932	3.7657	Yes
H3 a	Interactive → Prospector Strategy	Prospector strategy implementation is positively affected by the interactive use of MASs	0.3948	0.4324	**	0.0949	2.2426	Yes
H3 b	Innovative → Prospector Strategy	Prospector strategy implementation is positively affected by the use of innovative MAS information.	0.4574	0.4324	**	0.0971	2.3173	Yes
H4 a	Diagnostic → Prospector Strategy	Prospector strategy implementation is negatively affected by the diagnostic use of MASs.	-0.3197	0.4324	*	0.0915	1.6466	Yes
H4 b	Traditional → Prospector Strategy	Prospector strategy implementation is negatively affected by the use of traditional MAS information.	-0.1907	.4324	-	0.0844	0.3957	No
H5	Tech → Prospector Strategy	Top managers with a high level of technical orientation are positively related to the implementation of prospector strategy.	0.5334	.4324	***	0.0991	3.6052	Yes

*, **, and *** Significant at 0.10, 0.05 and 0.01 levels respectively (Two-tailed)

Source: Compiled by authors based on the PLS output

PC Path Coefficient

COD Coefficient of Determination

Discussion

The study explored how technically oriented top managers in Sri Lanka use MASs differently and how MASs support the strategy implementation process and the impact of technically oriented top managers on strategy implementation.

Top Manager Orientation and Use of MASs

The results obtained suggest that top manager orientation affects the use of MASs and such use affects strategy implementation. Top managers who are more technically oriented use MASs more interactively and less diagnostically.

Technically oriented top managers with their educational orientation are believed to possess less understanding of MASs and related performance measures and are more interested and knowledgeable about the primary process of the organization (Naranjo-Gil & Hartmann 2006, 2007). On the other hand, technically oriented top managers with their education and experience of technical functionalities have a very strong knowledge of the products and production process of the organization and as a result, as suggested by Østergren (2009), technically oriented top managers tend to use MASs mostly in an interactive way and use MASs mostly as a communication tool to come up with consensus solutions for the organization as a whole. For the above reasons, top managers with a technical orientation differ in interpreting the information generated via MASs, where they define the information largely in terms of activities and goals relating to their field of expertise. These findings are consistent with the findings of Østergren, (2009), Naranjo-Gil and Hartmann (2007), Hartmann (2005), Armstrong (1987) and Hambrick and Mason (1984).

Because of the wide knowledge the technically oriented top managers have of production and the production process of the organization, they allow more autonomy for their subordinates and also encourage employee participation in the decision making process. This leads to a bottom-up approach to decision making which is supported by the findings of Abernethy and Staelwinder (1990), Armstrong (1987) and Naranjo-Gil and Hartmann (2006, 2007). On the other hand, as technically oriented top managers are competent and comfortable in handling and understanding the core operating tasks of the organization, as suggested by Ittner and Larcker (1995), they encourage the bottom-up process of information in the process of problem solving which demands the attention of all levels of managers, peers and subordinates and encourage organizational attention from all levels of managers. These findings are in line with the conclusions of Chenhall et al. (2011), Naranjo-Gil and Hartmann (2006, 2007), Schäffer and Steiners (2004) and Simons (1995). As discussed earlier, technically oriented

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top managers do not possess a strong accounting-based knowledge. They only learn and get more insights into the relevant accounting terms and their importance during the management discussions in the organization. Thus, they use these terms and information to create and continue a dialogue with administratively-oriented top managers and therefore, as suggested by Abernethy and Vagnoni, (2004), they use MASs to cope with role conflict and to improve communication and dialogue with their professional peers.

During the interviews a General Manager of a leading ceramic tile organization in Sri Lanka, who has a technical orientation, described how he used the MAS in his organization.

... The information that MAS provides is very important to us and it's our management accountant who takes care of our whole accounting system and he is the one who takes care of preparing and interpreting the relevant management accounting information. I listen to him and do the needful as per his suggestions, after discussing the facts with other top managers as well....

This again confirms that technically-oriented top managers use MASs as a way of organizational learning, coordination and communication, which are integral components of interactive controlling systems suggested by Simons (1995).

The results obtained further suggested that technically-oriented top managers use more of innovative MAS information than traditional MAS information. As discussed earlier, technically-oriented top managers encourage organizational learning and innovation (Abernethy & Vagnoni 2004). In order to better facilitate innovation and organizational learning, top managers with a technical orientation need various kinds of strategic information which is better provided through innovative use of MASs. Thus it helps the said managers in managing and improving the organizational performance (Chenhall et al. 2011, Pavlatos 2012). Further, the innovative MAS information encourages innovation and thus helps the organization to be more proactive.

During the interviews a technically-oriented general manager emphasized using innovative management accounting information as follows:

... To maintain the quality of our products and to encourage the innovations, we practice lot of new management accounting practices such as Kaizan, Lean, Quality circles and also we are an ISO certified company...

Therefore, the interviews carried out and the statistical analyses indicate that technically oriented top managers use innovative MAS information.

On the other hand, technically-oriented top managers pay minimum attention to obtain information on operational efficiencies, cost minimization, meeting targets, etc. Hence they are less likely to use MASs more conservatively which is the case in using traditional MASs. Therefore, technically- oriented top managers are negatively related to the use of traditional MAS information.

Use of MASs and Strategy Implementation

H3a of the study hypothesized that there is a positive relationship between the interactive use of MASs and prospector strategy implementation.

Miles et al. (1978) categorized prospector strategy as dynamism in seeking new market opportunities and capabilities to develop new products to find creative new responses to suit customer demands. According to (Maher, 2000), the interactive use of MASs adds elements needed to respond appropriately and profitably to today's markets and to respond to the demands of flexibility, innovation and creativity which are the core elements of prospector strategy. Such use of MASs will harness the creativity that often leads to new product line extensions, processes and markets, and also enable managers to involve themselves regularly and personally in the decisions of subordinates.

Abernethy and Lillis (1995) suggested that a firm's ability to respond to market demands increases through coordinated policies and actions and willingness or capacity to offer product variations. The use of MASs interactively facilitates communication and coordination and therefore manufacturing flexibility.

The core elements of the interactive use of MASs, which facilitate manufacturing flexibility, inter-functional coordination and adaptation, have helped organizations to implement prospector strategy successfully and thus, the implementation of prospector strategy is enhanced by the use of MASs interactively. As prospector strategy encourages the interactive use of MASs it discourages the use of diagnostic MASs. This is indicated in Hypothesis H4a which depicts a negative significant relationship between the diagnostic use of MASs and prospector strategy implementation. Prospector organizations do not focus on improving the efficiency of their existing operations, are inflexible but cost efficient, and have highly

structured formal controls. This finding is consistent with the conclusions of Naranjo-Gil et al. (2009) and Abernethy and Lillis (1995).

H3b confirmed the positive relationship predicted between the innovative use of MASs and prospector strategy implementation. This finding is consistent with the prior works of Naranjo-Gil and Hartmann (2009), Maher (2000) and Miles et al. (1978).

As discussed, prospector strategy emphasizes innovation, flexibility, manufacturing strategies, and exploring new markets. Therefore, prospector strategy encourages product differentiation. Chenhall and Langfield-Smith (1998) found that innovative MASs are used more in the strategies that give more emphasis to product differentiation. Also, Bouwens and Abernethy (2000) showed that firms that produced highly customized products are more likely to adopt broad scope MASs which includes the use of more innovative MASs. This is because when organizations follow strategies based on innovativeness like prospector strategy, traditional based MASs alone will not be adequate for decision making to competitively engage in business and to survive. Further, prospectors operate in a highly dynamic environment which involves frequent changes and quick responses to new market opportunities. Innovative MAS techniques can better cater to such dynamic changes. Innovative MASs provide more futuristic information which is more important in a dynamic environment (Drury 2010).

In the interviews a General Manager of a prospector strategy implemented organization stated:

...Employees are highly encouraged to come up with their innovative ideas that can improve the operations of our organization. So we encourage the practice of Kaizen. Also to ensure the quality of our products TQM is implemented. Value chain analysis is also helpful in being efficient and managing the supply chain operations of the organization well...

The statement also supports the findings of the data analysis and therefore it can be concluded that the use of innovative MASs have a strong impact on the adoption of prospector strategy implementation.

H4b of the study predicted a negative relationship between the traditional use of MASs and the implementation of prospector strategy. Even though the results obtained revealed a negative relationship it was not statistically significant. Naranjo-Gil et al. (2009) have argued that it is common to use traditional MASs in every organization irrespective of the strategy they implement because of the importance of the information provided by traditional MASs.

Therefore the relationship proposed between the traditional use of MASs and prospector strategy implementation is not accepted in the study.

Top Manager Orientation and Strategy Implementation

Miles et al. (1978) described prospector strategy as companies that use innovativeness as the cornerstone of competitive advantage, where they offer a large array of state of the art products that are targeted at a variety of market segments. The results of H5 of the study confirmed a strong positive relationship between technically-oriented top managers and implementation of prospector strategy.

Innovativeness and the search for new market opportunities are well supported by the technically oriented top managers as they provide more autonomy and encouragement to their employees so that they have more freedom to think differently and come up with new products, market segments and production techniques, etc.

Further, technically oriented top managers are said to better face strategic change (Naranjo-Gil et al. 2009, Abernethy & Brownell 1999). To cope with change and competition, technically oriented top managers with their knowledge and experience of production process and techniques use their knowledge to make innovations. They look for various input substitutes which provide better quality either at the same cost or at reduced cost, add new features to the products or look for new market opportunities (Pavlatos 2012, Thomas & Ramaswamy 1996, Wisersema & Bantel 1992). These characteristics embedded in technically-oriented top managers match the core elements of the prospector strategy identified by Miles et al. (1978).

In the interviews this was supported by a managing director who is a technically oriented top manager in a leading Sri Lankan paint manufacturing company. He stated:

... When I do new additions to my products or to my businesses, I always go for the latest technology based innovations..., I'm so interested in studying and using new technology and new production methods... they provide us the competitive advantage to prosper in the future...

Therefore, the interviews and the statistical analysis confirm that the technically-oriented top managers go for technology-based developments and innovations and they encourage the implementation of prospector strategy.

Managerial and Practical Implications

The findings of the study are in line with the findings of Hambrick and Mason's (1984) Upper Echelon Theory (UET) and therefore, the current study confirms the applicability of UET in the Sri Lankan manufacturing sector. The study also provided insights into the links between uses of MASs and Miles et al. (1978) strategy typology. Accordingly, it was revealed that the interactive use of MASs and use of innovative MAS information assists the implementation of prospector strategy while the use of MASs diagnostically does not support the implementation of prospector strategy.

The findings benefit the business organizations in Sri Lanka in building the composition of top manager teams to match their strategy. Therefore, they will aid organizations to adopt and evolve in competitive dynamic business environments, especially at a time where the diverse composition of top management teams is on the rise and such top manager composition changes will have an impact on the firm's performance (Carson, Mosley & Boyar 2004).

The study further emphasized the importance of management accounting in providing information to match organizational strategy implementation. Organizations adopting the prospector strategy emphasize competitor position and information, and product market moves and information (Bhimani & Langfield-Smith 2007). Such information requirements are better met through the interactive style of use of MASs and use of innovative MAS information. The interactive style of use of MASs will help organizations to improve the organizational communication, team work, information sharing, etc. which facilitate innovation and establishing new horizons for the business.

The results of the study should help the top management of an organization to gain a better understanding of the potential uses of MASs for improving organizational performance, mainly relating to different uses of MASs and its impact on strategy implementation. Thus, they can better adjust the use of MASs to suit the specific style of strategy implementation (Anthony & Govindarajan 2004, Schäffer & Steiners 2004).

Technically oriented top managers are more focused on doing things differently that lead them to prefer the implementation of prospector strategy. Further, they are more willing to use MASs interactively which enhances organizational communication and information flow. The technically oriented top managers also prefer to use innovative MAS information which facilitates the innovative organizational culture. Thus, it can be concluded that the orientation of the top manager has a profound impact on the use of MASs and strategy.

Directions for Future Research

The researchers focused only on two observable managerial characteristics out of the six proposed in UET (Hambrick & Mason 1984). Hence, future researchers can expand their studies to cover other observable characteristics or a combination of them (Hambrick & Mason 1984, Bantel & Jackson 1989). In this study, the data was derived at a given point of time and as a result, the direction of significant associations could not be determined and therefore longitudinal studies on this area of study are encouraged. The sample for the study was collected from the Sri Lankan manufacturing sector. Generalizing the results to other industries or countries should be done carefully (Abernethy & Brownell 1999). Therefore, further research is required on its applicability in other industries in order to access the generalizability of the model.

Conclusion

The study suggests that top managers with a high level of technical orientation are more innovative and willing to do things differently. This drives them to support prospector strategy implementation. Further, such managers use MASs more interactively as they use MASs for communication, coordination, motivation, and as a learning machine in managing their organizations. Since the technically oriented top managers do not possess a sound understanding of financial controls and measures, they are less likely to use MASs diagnostically. The nature of innovativeness and exploring new market opportunities by the technically oriented top managers drives the need for different financial and non-financial information for decision making. As a result, technically oriented managers use more of innovative MAS information than the traditional MAS information.

The study also suggests that the diagnostic use of MASs will not facilitate the adoption of prospector strategy. Further, the interactive use of MASs and use of innovative MAS information aid the implementation of prospector strategy. This is because the use of MASs interactively will allow organizational learning and communication to support innovations. Also, the use of innovative MAS information will generate various financial and non-financial information which leads to create different competitive advantages for the organizations that will also help them to grow and survive in a competitive and dynamic business environment of today.

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Ownership Concentration and Degree of Compliance with Corporate Governance Best Practices of Public Listed Companies in Sri Lanka

G S Mapitiya, A R Ajward and Samantha Seneratne

Abstract

This study examines the relationship between ownership concentration and the degree of compliance with corporate governance best practices of public listed companies in Sri Lanka. Firstly, the study examines ownership concentration in terms of ownership types of fifty two companies listed on the Colombo Stock Exchange (CSE) for a five-year period from 2009 to 2013 by focusing on their ultimate ownership. Accordingly, two ownership types- 'closely held' and 'widely held'-were identified. Secondly, to measure the degree of compliance with corporate governance best practices, a Corporate Governance Index was developed incorporating selected governance characteristics pertaining to the board of directors. The study was conducted as a quantitative study based on secondary data collected from annual reports. The study finds that the ownership is concentrated in most of the selected companies with the presence of a controlling shareholder and widely held entities are rare in Sri Lanka as in the case of other Asian countries. Further, the analysis finds that a higher degree of ownership concentration has a significant negative relationship with compliance with corporate governance practices. This indicates that the degree of compliance with corporate governance best practices is significantly lower in closely held companies than in widely held companies. Hence, the study concludes that the degree of ownership concentration in Sri Lankan public listed companies has a significant influence on compliance with the corporate governance practices pertaining to board characteristics.

Keywords: Agency Theory, board of directors, closely held, corporate governance, ownership concentration, ownership types, widely held

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Introduction

The importance of corporate governance became very clear with many corporate scandals, failures, frauds and bankruptcies that took place around the world in recent times (Kaur & Gill 2008). A number of large American, European and Asian companies including Enron, WorldCom, Xerox, Tyco, Adelphia, Global Crossing, Parmalat, European's Enron, Hong Guang Co., LanTian Co., & Tong Hai Co. collapsed during the financial crises that took place all over the world (Wei and Geng 2008). In the Sri Lankan context, some corporate failures took place in the late 1980s and in the early 1990s through to 2008, especially in the Banking and Finance Industry (Heenetigala 2011). The lack of sound corporate governance practices has been identified as a main reason for these crises (Haat, Rahman & Mahenthiran 2008). This led to issues of corporate governance practices receiving considerable attention from the public, academics, policy makers and regulators recently as it is identified as a key factor that contributes to the success of companies and the economic health of society (Klein, Shapiro & Young 2005, Kaur & Gill 2008, Azim 2012). Further, Barton (2007) finds that investors are willing to pay a premium of 25 percent for a well-governed company. Therefore, the need for more effective monitoring mechanisms to improve corporate governance systems became a much needed requirement (Cazurra & Aguilera 2004).

Shareholders are the owners of companies (Monks & Minow 1995) and they are of different types (Connelly et al. 2010). For instance, La Porta, De Silanes and Shleifer (1999) identify different ownership types in companies around the world that include individual, family, state and widely held. Further, Gollakota and Gupta (2006) identify family, professional, government, foreign and public as different types of ownership of companies. Most of the companies in Anglo-Saxon countries like the USA and the UK are widely held. On the other hand, most companies in Asian countries are closely held by individuals and families (Claessens & Fan 2003, Wei & Geng 2008). These different ownership types result in different corporate governance systems in companies (Mollah, Farooque & Karim 2012). Hence, ownership is considered an important determinant of the governance system of a company (Klein, Shapiro & Young 2005).

Corporate governance issues arise from the separation of the ownership and the management of corporate entities (Jensen 1998). The widely held ownership structure of large companies in western countries such as the USA and the UK is considered as the origin of the conflict between the owners and the managers, which is known as the agency conflict (La Porta, Shleifer & Da Silanes 1999). This view was initially derived from the studies of Berle and Means (1932) and was developed further by Jensen and Meckling (1976). However, the

degree of conflict between the owners and the managers varies according to the degree of ownership concentration of the companies. Owners attempt to impose more formal monitoring mechanisms to control managers and avoid a conflict of interest between the owners and the managers (Jensen 1989, Mayer 1997). Mollah, Farooque and Karim (2012) stated that the corporate governance system varied according to the ownership structure of the corporate sector. In the Sri Lankan context, a previous study by Senaratne and Gunaratne (2008) found that ownership is concentrated in most Sri Lankan listed companies with the presence of a controlling shareholder and widely held entities are rare in the Sri Lankan context as in most other Asian countries. This study also reveals that these controlling shareholders make a significant impact on the manner in which the companies are governed in Sri Lanka. Extending the Senaratne and Gunaratne study, the current study addresses the issue of whether *the degree of ownership concentration in terms of ownership type influences compliance with corporate governance best practices of Sri Lankan public listed companies*. Accordingly, the main objective of the current study is to examine the relationship between ownership concentration in terms of ownership types and the degree of compliance with corporate governance best practices pertaining to the board of directors in public listed companies in Sri Lanka.

The next section of the paper discusses the literature related to corporate governance, ownership types and the agency theory. Then the hypotheses are developed and the theoretical framework is presented. Next, the methodology is outlined after which the analysis and discussion of findings are presented. This is followed by the conclusions of the study with implications and suggestions for future research.

Literature Review

Corporate Governance

The concept of corporate governance is defined in many ways in the literature. However, it is commonly agreed in these definitions that ensuring the financial health of a corporate entity is important. Shleifer and Vishny (1997) define corporate governance as the ways in which suppliers of finance to companies assure themselves of getting a return on their investment. On the other hand, the Cadbury Committee defines corporate governance as ‘the system by which companies are directed and controlled’ (Cadbury 1992, p.14). In addition, Bokpin, Isshaq and Otchere (2011) report that corporate governance is a system of mechanisms that serves to ensure that shareholder wealth is maximized and it does so via several methods geared towards enforcing the stewardship responsibilities of managers. As for the importance of the concept of corporate governance, the extant literature indicates that it is an essential

part of risk management for shareholders (Charkham & Simpson 1999). Further, corporate governance has not only significant implications for the financial stability and performance of companies (Rezaee 2009) but also wider implications for the economic development and social well-being of a country (Clarke 2004). More importantly, corporate governance becomes a multifaceted subject due to the complexities in the globalization of business operations (Monks & Minow 1995). Thus, researchers argue that corporate governance is a vital mechanism for an organization to survive in a competitive and turbulent business environment and also to achieve its long-term goals. According to Clarke (2004), corporate governance involves the exercise of power to direct and control companies. Many studies have cited the failure of corporate governance as one of the main causes of financial crises around the world (Bokpin 2013). Moreover, corporate governance is of critical importance to investors, insurers, regulators, creditors, customers, employees and other stakeholders of companies (Haat, Rahman & Mahenthiran 2008). In addition, Mollah, Farooque and Karim (2012) reported that corporate governance mechanisms are the market, institution and legal settings that protect outside investors from the opportunistic behaviour of managers or controlling shareholders.

Good corporate governance is accepted as vital for achieving the millennium development goals and sustainable economic growth (Mwanja et al. 2014). Cazorra and Aguilera (2004) state that good governance practices consider the issues related to the role, composition, remuneration, selection and removal of the board of directors, relationships with shareholders and top management, auditing and information disclosure. Clarke (2014) states that boards of directors are an essential part of the DNA of corporations, and corporate governance is a vital means of fulfilling the strategic potential of corporations. In addition, Clarke (2014) states that in the absence of such protection, asymmetries of information and difficulties of monitoring suffered by outside investors enable managers to misallocate and expropriate corporate resources, often at the expense of minority investors and of long-term firm performance. Most of the early definitions of corporate governance explain corporate governance as a system utilized to shield investors' interests (Tuan 2014).

Corporate governance codes have been introduced from time to time by many countries to articulate best practices on governance. The first code of corporate governance was introduced in the late 1970s in the USA emphasizing the role of the board of directors (Cazorra & Aguilera 2004). However, the Cadbury Report issued in the UK in 1992, which is the flagship guideline for corporate governance practices (Stiles & Taylor 1993), focuses on the financial aspects of corporate governance (Cazorra & Aguilera 2004). The first code of best practices on corporate governance was issued in Sri Lanka in 1997 by the Institute of Chartered

Accountants of Sri Lanka (CA Sri Lanka). This was revised several times and the latest code was issued jointly by the CA Sri Lanka and the Securities and Exchange Commission (SEC) of Sri Lanka in 2013. These Sri Lankan codes are also largely influenced by the codes of best practice developed in the UK.

Ownership types

Firms may be owned by different types of investors (Connelly et al. 2010) and they act differently in governing a company. The widely held ownership structure of large firms in Anglo-Saxon countries is known as the root cause of agency conflicts in the firm (La Porta et al. 2000). Thus, the agency theory suggests that the presence of a large shareholder can lead to better performance because it reduces agency problems between the owners and the managers (Jensen & Meckling 1976). La Porta et al. (2000) divide firms into two categories as widely held and closely held with a controlling owner, based on an analysis of ultimate owners in selected 27 wealthy economies. Similarly, Klein, Shapiro and Young (2005) classify companies as widely held and not widely held, based on the voting rights of shareholders. La Porta et al. (2000) also report that several other studies (Eisenberg 1976, Demsetz 1983, Demsetz & Lehn 1985, Shleifer & Vishny 1986, Morck, Shleifer & Vishny 1997) show that even among the largest American firms, there is a modest concentration of ownership.

Recent research has documented large differences among countries regarding ownership concentration in publicly traded firms (La Porta et al. 2000). Large shareholdings or majority ownership is relatively uncommon in the USA and the UK but in most European countries as well as in Latin America, Southeast Asia and Africa, firms are typically controlled by families (Wei & Geng 2008). La Porta et al. (2000) also cited studies of other rich nations that reveal a more significant concentration of ownership, for example, Germany (Edwards & Fischer 1994, Franks & Mayer 1994, Gorton & Schmid 1996), Japan (Prowse 1992, Berglof & Perotti 1994), Italy (Barca 1995) and seven OECD countries (European Corporate Governance Network 1997). In developing economies, ownership is also heavily concentrated (La Porta et al. 2000). The case is no different in Sri Lanka as in most Sri Lankan listed companies ownership is concentrated in the hands of a controlling shareholder, who enjoys much higher controlling rights over cash flow and widely held entities are rare as in most other Asian countries (Senaratne & Gunaratne 2008).

Agency Theory

The principal-agent conflict identified by Jensen and Meckling (1976) is the foundation of corporate governance studies (Jensen 1998). Indeed, the crux of the principal-agent model is the separation of ownership and control of companies and it is also the starting point of most discussions on corporate governance (Shleifer & Vishny 1997). Fama and Jensen (1983) state that the separation of decision-making and risk-bearing is more common in large companies compared to other closely held companies. Furthermore, Lubatkin et al. (2005) documented that agency theory discusses the issues that arise when principals assign decision-making powers to agents in any organization. Further, they report that managers (agents) involved in day-to-day operations can hide information from widely spread owners (principals) who do not have access to this information. Therefore, owners are compelled to invest in monitoring mechanisms to avoid the opportunistic behaviour of managers (Hart 1995). It is obvious that unmonitored managers will attempt to achieve their own goals rather than those of owners (Greenwood, Deephouse and Li 2007). Therefore, effective corporate governance practices prevent the conflicts of interest between agents (managers) and principals (owners) by improving the use of corporate resources for the maximization of owners' returns (Love 2010).

The current study is grounded on the literature on corporate governance, ownership concentration in terms of ownership types and agency theory discussed in this section. The next section presents the conceptual framework of the current study and the related hypothesis.

Conceptual Framework and Hypothesis

As reported by Shleifer and Vishny (1997), most of the past studies on ownership types have worked within an agency theory framework. It is found that different ownership types affect the relationship between corporate governance practices and corporate performance differently (Lappalainen & Niskanen 2012). Ownership types, for the purpose of this paper, have been identified based on the direct and indirect voting rights with a cut off value of 20 per cent and consequently, this paper identified two ownership types, namely, widely held and closely held (La Porta et al. 2000, Klein, Shapiro & Young 2005). Since the board of directors plays a pivotal role in corporate governance, this paper focuses principally on the board structure and the board functions to understand corporate governance practices (Mayer 1997, Krafft et al. 2013).

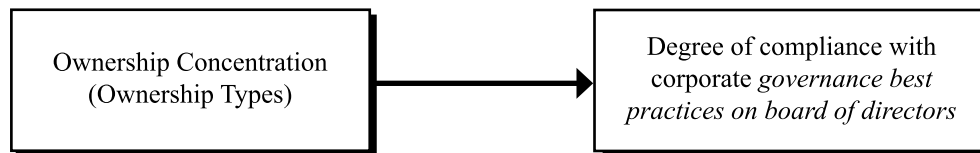
Ownership Concentration and Degree of Compliance with Corporate Governance Best Practices of Public Listed Companies in Sri Lanka

As indicated in the literature review, the principal and agent model introduced by Jensen and Meckling (1976) suggests that corporate governance issues arise due to the separation of ownership and management. Corporate governance is concerned with ways of bringing the interests of the two parties in line with each other and ensuring that firms are run for the benefit of investors (Mayer 1996). The firms' ownership structure is a primary determinant of the extent of agency problems (Lemmon & Lins 2003). As found in the literature, corporate governance systems vary according to the ownership structure of the organization, and the extant literature suggests that widely-held firms are governed better than closely-held firms. Klein, Shapiro and Young (2005) report that family firms, a form of closely-held firms, do not show much compliance to governance practices. In addition, Wei and Geng (2008) suggest that in China, the heavily concentrated equity ownership in the hands of large state-owned shareholders results in a less effective corporate governance mechanism. Furthermore, Hermalin (2005) finds a negative relationship between the composition of the board and concentrated managerial ownership. Based on the findings of these studies, the following hypothesis is proposed and tested in this study.

H1: *Ownership concentration in terms of ownership type is negatively associated with the degree of compliance with corporate governance best practices pertaining to the board of directors.*

This proposed relationship is graphically shown in Figure 1.

Figure 1: Conceptual Model



Methodology

Sample and Data

The population of the study is the 293 companies listed in the CSE at the end of November 2014 representing twenty industry sectors. The sample was drawn from the best representation of the population to ensure more generalized results. The unit of analysis was a firm-year. The present study was based on secondary data, which is based on the annual reports downloaded from the CSE website-www.cse.lk. In selecting the sample, companies that were listed

during the sample period were excluded. Financial institutions were also excluded from the sample as their unique financial structure makes them often subject to special rules and regulatory requirements, which are different from those of other sectors (Liang, Huang & Lin 2011, Bauwhede 2009). Hence, the total number of companies that qualified for the sample selection was 208 of which a sample of 52 companies was selected. Firstly, the qualified companies were divided into three categories: large, medium and small, based on their market capitalization. Then, seventeen (17) companies were selected from each category. The sample period was five years, from 2009-2013. As a result, two hundred and sixty (260) firm-year data was available for the analysis. The selected sample companies are represented by fourteen sectors as shown in Table 1 below.

Table1: Sector composition

Sector	Number of firms	Number of firm-years	%
Chemicals and Pharmaceuticals	01	05	1.9
Diversified	07	35	13.5
Food, Beverage and Tobacco	07	35	13.5
Footwear and Textiles	02	10	3.8
Hotels and Tourism	10	50	19.4
Health	02	10	3.8
Land and Property	01	05	1.9
Manufacturing	08	40	15.4
Oil Palms	01	05	1.9
Power and Energy	02	10	3.8
Plantation	05	25	9.7
Stores and Supplies	02	10	3.8
Telecommunication	02	10	3.8
Trading	02	10	3.8
Total	52	260	100.0

Definitions of Variables and Measures

Ownership concentration

Ownership concentration is operationalized using ownership types for the purpose of this study; and based on the extant literature the ownership types are identified based on direct and indirect voting rights with a cut off value of 20 per cent (La Porta et al. 2000, Klein, Shapiro & Young 2005). Consequently, this study identified two ownership types: *widely-*

held and *closely-held* (La Porta et al. 2000, Klein, Shapiro & Young 2005, Senaratne & Gunaratne 2008). Accordingly, a company with a shareholder with voting rights of 20 per cent or more is classified as a *closely-held company*, and otherwise it is classified as *widely-held* for the purposes of this study. The ownership data was derived from the annual reports of sample companies and their parent companies during the period 2009-2013. When the controlling shareholder of a company is another company, the shareholding of the latter was analyzed, which is the chain of control, to identify whether the former is widely held or not (La Porta, Shleifer & Da Silanes 2000). For analytical purposes, the ownership concentration is operationalized as a dichotomous (dummy) variable (*ownership*), which is denoted as '1' for closely-held companies and '0' for widely-held firms.

Degree of compliance with corporate governance practices

Corporate governance information pertaining to the board of directors is obtained from the annual reports of sample companies for the period 2009 to 2013. Since the board of directors plays a pivotal role in corporate governance, the paper used an index to measure corporate governance constructed using the following corporate governance characteristics: board size, number of independent directors, number of board meetings, percentage of board attendance, CEO-Chair duality, audit committee independence and remuneration committee independence (Azim 2012, Black, Jang & Kim 2006, Love 2010, Krafft et al. 2013, Villalonga & Amitb 2004). In this study, the approach to scoring items is essentially dichotomous, with a score of one (1) assigned to an item if it satisfies the condition (i.e., presence of the required board characteristic) and a score of zero (0) if it does not. The total score CG_{INDEX} for a company is:

Equation 1: Corporate Governance Index

$$CG_{INDEX} = \sum_{i=1}^n d_i$$

Where d_i is '1' if the item i is disclosed and '0' otherwise; n is the maximum number of items.

Control variables

This paper used financial leverage, firm age industry/sector and total assets as control variables of the analysis in line with the extant literature. In the extant literature, these variables are used due to their control effect on the association between the ownership type and the degree of compliance with corporate governance best practices; and the findings of

these studies indicate mixed results. Financial leverage was measured as a proportion of total debt to equity of the company (Klein, Shapiro & Young 2005). The firm age was measured by the number of years that a firm has existed since the date of establishment (Villalongaa & Amitb 2004). Likewise, different sector dummies (see Table 1) were added to each sector (Lappalainen & Niskanen 2012) and the natural logarithm of total assets at the end of each respective period was used to measure the total assets of each company (Bauwhede 2009, Klein, Shapiro & Young 2005, Azim 2012).

Strategy for Analysis

Panel data analysis

Green (2008) states that panel data analysis is the appropriate data analysis method for a study of this nature as it uses both cross-sectional and time-series data. Furthermore, panel data is described as data collected for individual units observed over a considerable period (Gujarati 2003, Hsiao 2003). Panel data analysis is one of the most efficient statistical methods available and widely used in econometrics, social science and epidemiology (Maddala 1986). Moreover, several terms have been used to describe panel data including pooled and longitudinal data, event study and cohort analysis (Gujarati 2003) using *Stata*, which is a widely used statistical package useful in programs for panel data analysis (Gujarati 2003).

Model

To test the relationship between ownership concentration in terms of ownership type and degree of compliance with corporate governance practices pertaining to the board of directors including the control variables mentioned above, the following model was used:

$$CG_{INDEX} = \alpha + \beta_1 Ownership + \beta_2 Lever + \beta_3 Age + \beta_4 Sec + \beta_5 LnTA + \varepsilon$$

Where: CG_{INDEX} = Corporate Governance Index; *Ownership* = Ownership Types; *Lever* = Financial Leverage; *Age* = firm age; *Sec* = Sector; *LnTA* = natural log of total assets, 'which were defined in the Section on 'Definitions of variables and measures' above. ¹In the next section, the results of the analysis suggested in this section are presented.

¹ The data has been winsorised at the 0.05 level to make sure that outliers do not affect the data analysis.

Analysis and Discussion

Table 2 provides the characteristics of the sample in terms of descriptive statistics of the dependent and independent variables used in this study.

Table 2: Characteristics of the sample

Variable*	N	Mean	Max	Min	SD	p25	p50	p75
<i>CG_{INDEX}</i>	260	4.11	6.00	1.00	1.16	3.00	4.00	5.00
<i>Ownership</i>	260	0.79	1.00	0	0.41	1.00	1.00	1.00
<i>LEVERAGE</i>	260	0.55	1.32	0.02	0.42	0.16	0.50	0.90
<i>AGE</i>	260	38.68	99.00	9.00	26.19	19.00	30.00	59.00
<i>LnTA</i>	260	7.28	1.15	9.75	5.62	6.43	6.92	7.91

**Note: The definitions of the variables are indicated in the sub-section, 'Definitions of variables and measures'.*

In terms of CG_{INDEX} , which is based on compliance with corporate governance best practices pertaining to board characteristics, Table 2 indicates that the maximum value is 6 and the minimum is 1, and the mean value of this index is 4.11. Based on this mean value, it could be observed that the overall compliance level is 58.71% (i.e., 4.11 divided by the maximum achievable index value of 7). Furthermore, the median value of 4.00 shows that fifty percent of the companies have achieved a CG_{INDEX} of four or less. However, the standard deviation of this index is 1.16.

The mean value of variable: *Ownership* is 0.79 which shows that the majority of the sample companies are closely-held (precisely, forty out of fifty two companies in the sample are closely-held). The analysis of the data further indicates that these closely-held companies have major shareholders representing an individual, a few closely connected individuals or a family. On the other hand, only 21% of the sample companies are widely-held. La Porta et al. (2000) found that in developing economies, ownership is heavily concentrated and only 36% of the companies in such countries are widely-held. In addition, in New Zealand, which is also considered an emerging market, only 30% of companies can be classified as widely-held. Furthermore, Claessens and Fan (2003) state that one or several members of a family hold tightly onto the shares of a typical Asian corporation.

Table 3: Summary of correlations

	Ownership	CG _{INDEX}	LEVERAGE	AGE
<i>Ownership*</i>	1.000			
<i>CG_{INDEX}</i>	-0.421***	1.000		
<i>LEVERAGE</i>	0.038	-0.032	1.000	
<i>AGE</i>	-0.041	0.055	0.012	1.000

* Note: The definitions of the variables are indicated in the sub-section, 'Definitions of variables and measures'.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 3 presents Spearman's correlation for all the variables in the study. Ownership concentration (*Ownership*) in terms of ownership types shows a significant negative relationship with the degree of compliance to corporate governance best practices pertaining to board characteristics, (*CG_{INDEX}*) at a confidence level of 99%, as hypothesized in the conceptualization of this paper. The multivariate panel data regression analysis and results are discussed next.

According to the methodology discussed in this paper, the multivariate panel data regression analysis was used to identify the association between ownership concentration in terms of ownership types and the degree of compliance with corporate governance best practices pertaining to the board of directors. Table 4 depicts the results of this analysis.

Table 4: Panel data analysis results: Ownership type and corporate governance

	CG _{INDEX}
<i>Ownership*</i>	-1.067***
<i>LEVERAGE</i>	0.049
<i>AGE</i>	-0.002
<i>LnTA</i>	0.327***
Constant	3.241***
Observations	260
Overall R ²	0.3843
Wald chi ²	41.02
Model Sig.	0.006

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

* Note: The definitions of the variables are indicated in the sub-section, 'Definitions of variables and measures'. The coefficients pertaining to Sector and Year dummies are not depicted.

Ownership Concentration and Degree of Compliance with Corporate Governance Best Practices of Public Listed Companies in Sri Lanka

As shown in Table 4, the results support the hypothesized negative relationship between ownership concentration in terms of ownership types (*Ownership*) and degree of compliance with corporate governance practices pertaining to the board of directors (*CG_INDEX*). Hence, the study finds that widely-held firms are more governed in terms of accepted governance practices than closely held firms. This finding is in line with several studies that have previously dealt with the relationship between different dimensions of corporate governance and ownership concentration. Klein, Shapiro and Young (2005) report that family firms in Canada, a form of closely-held firms, showed less compliance with governance practices. In addition, in China, the heavily concentrated equity ownership in the hands of large state-owned shareholders gives rise to a less effective corporate governance mechanism in Chinese companies (Wei & Geng 2008). Further, Hermalin (2005) found a negative relationship between the composition of the board and managerial ownership.

Conclusion

This paper examined the association between ownership concentration in terms of ownership types and degree of compliance with corporate governance best practices pertaining to the board of directors of Sri Lankan public listed companies. A negative association was hypothesized between these two constructs in the study. The findings of this study reveal a high level of concentration of ownership in most Sri Lankan public listed companies with the presence of a controlling shareholder. The major shareholders of these companies are represented by an individual, a few closely connected individuals or a family. The findings of the multivariate panel data regression analysis indicate that the concentrated ownership structure has a significant negative association with compliance to corporate governance best practices relating to the board of directors. These findings highlight the need for Sri Lankan companies to formulate an optimal ownership structure to improve corporate governance practices, which in turn would lead to the eradication of possible malpractices such as corruption, fraud and misappropriation of resources to ensure long-term sustainability. Hence, policy makers and regulators such as SEC, CA Sri Lanka, and the Central Bank of Sri Lanka can draw insights from the findings of this study in making corporate governance reforms in relation to minority protection and other related areas in developing an appropriate corporate governance structure for public listed companies in the wider society and preventing financial scandals which are likely to occur due to lack of good governance practices.

However, this study has certain limitations. Firstly, the scope of the study was limited to 52 listed companies in Sri Lanka. Therefore, future researchers can expand the study by using a larger sample of companies. In addition, the current study used only a five-year time span

from 2009 to 2013, which can also be expanded. Secondly, from a corporate governance point of view, the study considered the compliance only in terms of board characteristics (including audit committee independence and remuneration committee independence). Therefore, other aspects of corporate governance can also be incorporated in future research. Finally, this study excludes companies in the banking and financial sectors like banks, finance companies, leasing companies, insurance companies, investment companies and fund management companies due to their unique corporate governance regulations. Therefore, it would be useful if future researchers undertake studies on those companies as well and focus on sector-wise studies separately to further explore the relationships studied in this paper.

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Research Note: Validating INDSERV (Industrial Service Quality) Scale in Business to Business Context: A Study Based on the Sri Lankan Hotel Sector

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Abstract

Service quality is generally measured on the SERVQUAL scale, developed by Parasuraman, Berry & Zeithaml (1985). However, the appropriateness of SERVQUAL is disputed as it is specifically designed for the B2C (business-to-customer) context (Gounaris 2005a, 2005b, Lee 2011). Thus, Gounaris (2005a, 2005b) developed an instrument called INDSERV that specifically measures business-to-business (B2B) service quality performance. The purpose of this study is to validate the INDSERV scale in Sri Lanka as well. Cross-sectional data of service quality in the outsourcing context was collected through a survey of managers in the hotel sector in Sri Lanka using self-administered structured questionnaires. A total of 183 usable responses were collected. Unidimensionality, reliability and validity of the scale were assessed accordingly. Among the four dimensions of the scale, Hard Process Quality shows the highest contribution on the vendors' service quality performance ($\beta = 0.98$) followed by Output Quality ($\beta = 0.86$). Statistical tests were proposed to exclude the 'potential service quality' dimension from the scale as it reported weak reliability ($\alpha = 0.25$, all item total correlations were below 0.1). There were 22 items in the INDSERV scale and the refined model contains only 12 items. In conclusion, this study identified the need for a field survey to uncover unique factors that measure industrial service quality in Sri Lanka as it may be a reason for the contextual mismatch of a borrowed scale.

Keywords: business-to-business, INDSERV, outsourcing, service quality.

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Introduction

Collaboration among firms enhances their respective competitiveness and develops their resource bases (Al-Natour & Cavusoglu 2009), which can be in the form of strategic alliances, mergers, partnerships or outsourcing. It is imperative that any form of collaboration relies on the strength of the members' relationship beyond traditional purchasing. With regard to the upstream supply chain of service firms, vendors play a major role in satisfying customers.

The vendor's performance basically includes quality and other performance specifications. They are generally evaluated through SERVQUAL scale (Parasuraman, Berry & Zeithaml, 1985, 1988). But, it appears to perform weaker in business to business (B2B) contexts (Gounaris 2005a, 2005b, Lee 2011). Alternatively, Gounaris (2005a, 2005b) developed a measurement scale to evaluate vendor's service performance known as INDSERV. This is widely accepted for the evaluation of service performance in the B2B context. The scale comprises four service quality dimensions that a firm expects from its B2B business partners: potential quality, hard process quality, soft process quality and output quality. Together, these dimensions explain 22 aspects (items) of service quality and other performance expectations. This study investigates the outsourcing practices of the service sector in Sri Lanka in order to validate the INDSERV scale. The service sector has more than a 57 percent share of gross domestic production (during 2009-2014). Telecommunication, trading, ports, hospitality and financial services are the main contributors to the growth (Source: Central Bank of Sri Lanka, website: http://www.cbsl.gov.lk/htm/english/08_stat/stat.html). According to the pre-field study conducted, only the hotel industry has been formulating strategic partnerships with outsourcing vendors at multiple level activities as their main competitive strategy. Thus, the authors assumed that the hotel industry covers a wide range of service quality aspects in business-to-business relationships. Having identified the importance of the INDSERV scale as a measurement of B2B service quality, this study attempts to validate the scale in the Sri Lankan context.

This paper is structured in the following way. First, the literature is briefly reviewed for business-to-business service quality. Second, the research setting and chosen research methodology are discussed. Third, the analyses of the empirical research findings are presented. Fourth, managerial and theoretical implications and suggestions for future research are presented.

Literature Review

Whipple and Frankel (2000) pointed out that the vendors' ability to meet performance expectations is a key success factor in a B2B business context. The best vendors are those that can meet the needs of the buying organization in terms of capacity, quality, technology, price, and service (Ogden 2006). Petersen, Ragatz & Monczka (2005) attempted to measure the vendor's performance by improvements in on-time delivery, quality and responsiveness. Nevertheless, prompt delivery has been highly recognized as an important aspect of outsourcing (Chan & Chin 2007, Rajabzadeh, Rostamy, & Hosseini 2008, Byramjee, Bhagat, & Klein 2010). Furthermore, many authors see pricing as an important aspect of economic transactions and relationships, but different studies use different terms to measure pricing performances such as accuracy in budgeting (Rajabzadeh et al. 2008) and competitive cost of goods from the suppliers (Chan & Chin 2007).

In addition, service quality improvements (Bettis, Bradley & Hamel 1992, Allen & Chandrasekhar 2000) and knowledge contributions (Cusmano, Mancusi & Morrison 2000, Banerjee & Williams 2009) are also used to measure a vendor's performance. Service quality is generally measured using the SERVQUAL scale, developed by Parasuraman et al. (1985, 1988). However, the appropriateness of the SERVQUAL scale is in doubt, as it is specifically designed for the B2C (business to customer) context (Gounaris 2005a, 2005b, Lee 2011). Gounaris (2005 b) developed a measurement instrument called INDSERV that specifically deals with business-to-business (B2B) service quality.

Gronrøos, (1984) is the pioneer in conceptualizing B2Bbusiness- to-business service quality. He claimed that service quality in a B2B context could be measured in terms of 'technical quality' and 'functional quality', which was the foundation for the development of the INDSERV scale. Referring to Gounaris (2005a, 2005b), the development of a proper scale for B2B services has evolved in the past two decades. Table 1 gives a summary of different quality aspects, identified in previous studies.

Table 1: Service Quality in B2B Context

Measure	Source Citations from:
Technical quality /hard quality: core operation-related elements	Gronrøos, 1984
Functional quality/ soft quality: interaction between individuals	
Process quality: quality of service delivery	Morgan 1991
Outcome quality: quality of service received	
Potential quality: search attributes of provider's ability to perform the service (i.e. vendors' ability) before the relation has actually begun	Bochove 1994

Source: Gounaris (2005a) Measuring service quality in B2B services: an evaluation of the SERVQUAL scale visa versa the INDSERV scale.

The technical/hard quality and functional/soft quality represent the different quality aspects of the service delivery process. Gounaris (2005a), however, combined Gronrøos (1984), Szmigin (1993) and Morgan's (2001) ideas for the classification of process quality and established 1) hard process quality and 2) soft process quality. Combining it all, he formulated four dimensions as the INDSERV scale to measure service quality in a B2B service context. Table 2 depicts the items of the INDSERV scale.

There are 22 items, which cover potential quality, hard process quality, soft process quality and output quality that measure the vendor's performance. Moreover, with respect to the items in the INDSERV scale, they cover not only quality aspects, but also a range of other performance indicators of the vendors' service performance, compared to the scales/measures applied previously (Whipple & Frankel 2000, Ogden 2006, Petersen et al. 2005, Chan & Chin 2007, Selviaridis et al. 2008, Rajabzadeh et al. 2008).

Table 2: INDSERV Scale

Dimension	Code	Item
Potential quality (PTQ)	PTQ 1	1. Offers full service
	PTQ 2	2. Has required personnel
	PTQ 3	3. Has required facilities
	PTQ 4	4. Has required management philosophy
	PTQ 5	5. Has a low personnel turn-over
	PTQ 6	6. Uses network of partners/ associates
Hard Process quality (HQ)	HQ1	7. Keeps time schedules
	HQ2	8. Honours financial agreements / stays in budget
	HQ3	9. Meets deadlines
	HQ4	10. Looks at details
	HQ5	11. Understands our needs
Soft process quality (SQ)	SQ1	12. Accepts agreement enthusiastically
	SQ2	13. Listens to our problems
	SQ3	14. Opens to suggestions/ideas
	SQ4	15. Has pleasant personality
	SQ5	16. Argues if necessary
	SQ6	17. Looks at our interests
Output quality (OQ)	OQ1	18. Reaches objectives
	OQ2	19. Has a notable effect
	OQ3	20. Contributes to our sales/image
	OQ4	21. Is creative in terms of its offering
	OQ4	22. Is consistent with our strategy

Source: Gounaris (2005a) Measuring service quality in B2B services: an evaluation of the SERVQUAL scale visa versa the INDSERV scale, *Journal of Services Marketing*, 19/6, (2005, p. 427).

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The items measured using a 7-point Likert scale, ranging from 1 = 'strongly disagree' to 7 = 'strongly agree' in the original study.

Methodology

This study is purely quantitative and data was collected from the hotel industry in Sri Lanka. A self-administered questionnaire was developed including a demographic profile and the INDSESV scale. Firstly, the content validity of the questionnaire was assessed. The content validity is a subjective but systematic evaluation of how well the content of the scale represents the measurement task at hand. A pilot study served as a supplementary method to assure content validity. Content validity can be determined by having a panel of experts examining whether the items sufficiently describe the constructs being measured in the context of the study. Bryman and Bell (2007, p. 165) viewed it as an 'intuitive' process. The content validity of the questionnaire was tested in two rounds. Firstly, it was forwarded to peers. The group comprised twelve senior PhD students from the University of Malaya, Malaysia; University of Nagoya, Japan and the University of Otago, New Zealand. They were asked to check the appropriateness of wordings, flow of questions, or make any other suggestions, which in their opinion require improvement. Minor changes were proposed, and corrections were carried out. Secondly, the altered questionnaire was forwarded to five individuals. Three of them are academics from Malaysia and Sri Lanka, who are familiar with services management and quality management. Two professionals were selected from the hotel industry in Sri Lanka for their comments as well. The preparation of the final questionnaire considered the relevant comments of all experts.

According to the 2011 Directory (Rainbow Pages), there are 384 registered hotels in Sri Lanka. However, 81 'one star' and 24 'unclassified' hotels were omitted from the population, as the pre-field study found that these hotels are less likely to outsource due to their small size. Thus, the questionnaire was forwarded only to 279 hotels but responses were received from only 189. Six questionnaires were excluded from the analysis due to incompleteness and missing values. Thus, hundred and eighty three (183) usable completed questionnaires were subjected to the analysis. The hotel organizations were considered as the unit of analysis of the study. The respondents were middle level managers who handle the procurement system of the corresponding firm. The data analysis started with descriptive statistics. Then the INDSESV scale was subjected to an exploratory factor analysis, reliability tests and confirmatory factor analysis.

Data Analysis

Quantitative data was analyzed using Principle Component Analysis and Structural Equation Modeling (SEM) as it allows validating, refining and estimating complex relationships (Hair et al. 2006;). A total of 183 hotels were investigated. Most of the hotels studied are rated as two star (39%), followed by three (35%), four (24%), and five star (2%). The majority of respondents were middle level managers (43%), followed by executives (25%), and individuals who specified their designation as ‘managers’ (17%). A total of 31 respondents declined to state their designation details.

The Kaiser-Mayer-Olkin measure of sampling adequacy was acceptable (0.81) and Bartlette’s test of sphericity was significant, indicating that the items were correlated and suitable for factor analysis (Hair et al. 1998). With regard to the internal consistency of the scale, Cronbach’s alpha was used (Table 3).

Table 3: Cronbach’s Alpha Reliability

Dimension/Item	Item-Total Correlation	Cronbach’s α if Deleted	Cronbach’s Alpha
Vendors’ potential quality			0.250
PTQ1	.080	-.079 ^a	
PTQ2	-.033	.086	
PTQ3	0.02	0.34	
PTQ4	0.03	0.45	
PTQ5	.010	.022	
PTQ6	-.003	.044	
Vendors’ hard process quality			0.797
HQ1	.118	.647	
HQ2	.417	.506	
HQ3	.331	.554	
HQ4	.378	.527	
HQ5	.529	.437	
Vendors’ soft process quality			0.725
SQ1	.188	.763	
SQ2	.535	.663	
SQ3	.517	.669	
SQ4	.498	.676	
SQ5	.519	.669	
SQ6	.522	.669	
Vendors’ output quality			0.795
OQ1	.593	.750	
OQ2	.420	.803	
OQ3	.598	.748	
OQ4	.660	.728	
OQ5	.610	.744	

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None of the instrument subscales except PTQ (Potential Quality) indicated any value below the threshold level of Cronbach's alpha ($\alpha=0.70$). An item with a value that is less than 0.25 was considered as very weak, and played a very small role in conceptualizing the given factor (Nunnally 1978). Accordingly, the PTQ dimension was discarded due to a very low alpha value (0.25), and item-correlations were below the cut-off point (0.25). This reflects that the context of the study (i.e., the hotel sector in Sri Lanka) does not show sufficient concern for future occurrences, and thereby demonstrates the characteristics of the 'short-term orientation' nature in developing countries (Hofstede 1984). The reason may be high economic uncertainty in developing countries. Next, all other variables were subjected to a factor analysis. An exploratory factor analysis was performed to check the unidimensionality of the IND SERV scale. The results with cross loadings are reported in Table 4.

Table 4: Exploratory Factor Analysis for IND SERV

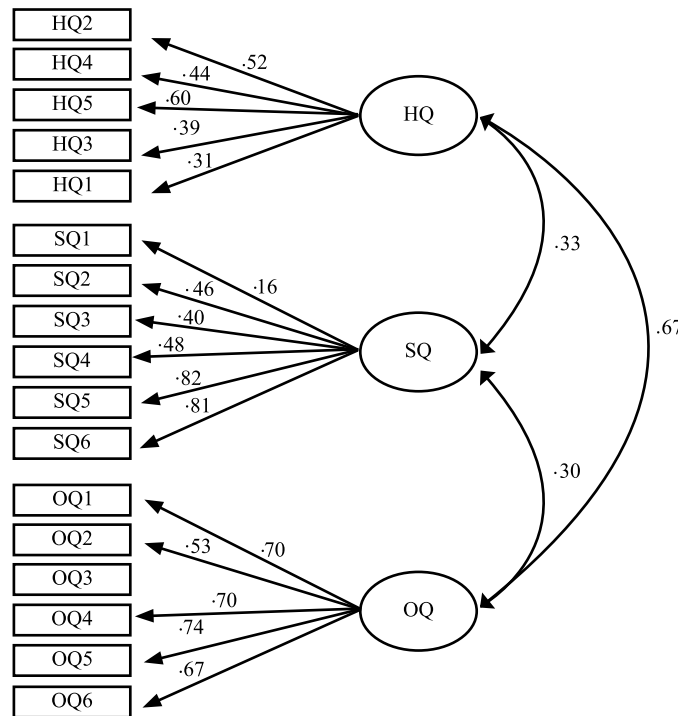
Items/dimensions (IND SERV)	Component			
	1	2	3	4
Potential Quality				
PTQ1	-.159	.104	.655	.110
PTQ2	.089	-.038	.243	-.556
PTQ5	.170	-0.47	.063	.620
PTQ6	.403	-.131	-.051	.196
Soft Process Quality				
SQ1	.064	.205	.166	.566
SQ2	.081	.742	.029	.013
SQ3	-.096	.715	.228	.178
SQ4	.130	.684	.173	-.003
SQ5	.221	.677	-.271	.029
SQ6	.182	.677	-.248	.023
Hard Process Quality				
HQ1	-.142	-.131	.315	.507
HQ2	-.135	.184	.618	-.135
HQ3	-.334	.145	.549	.046
HQ4	.132	.144	.517	.198
HQ5	.725	.003	-.055	.159
Output Quality				
OQ1	.693	.105	.181	-.034
OQ2	.642	.101	-.088	.107
OQ3	.660	.138	.319	-.178
OQ4	.682	.242	.264	-.128

1. Total variance extracted by 4 factors = 48.141%
2. Extraction Method: Principal Component Analysis.
3. Rotation Method: Varimax with Kaiser Normalization

Even though unidimensionality is not well demonstrated in the scale (except soft process quality and output quality dimensions), EFA created four factors. The number of factors generated is well aligned to the original scale developed by Gounaris (2005a). These four factors explain only 48.141 per cent of total variance, which is considerably low. The PTQ (i.e. potential quality) items are scattered among three factors and this results in poor discriminant validity. Furthermore, SQ1, HQ1 and HQ5 deviated from the theoretically defined location. With respect to the factor loadings, PTQ6 is determined to be below 0.5.

The deletion of items due to statistical issues is not advisable in the beginning (Hair et al. 2006), as this may affect construct validity. Then, the scale was subjected to a confirmatory factor analysis to assess convergent validity, composite reliability and discriminant validity. The first order measurement model for INDSESV is shown in Figure 1.

Figure 1: 1st order Measurement Model for INDSESV



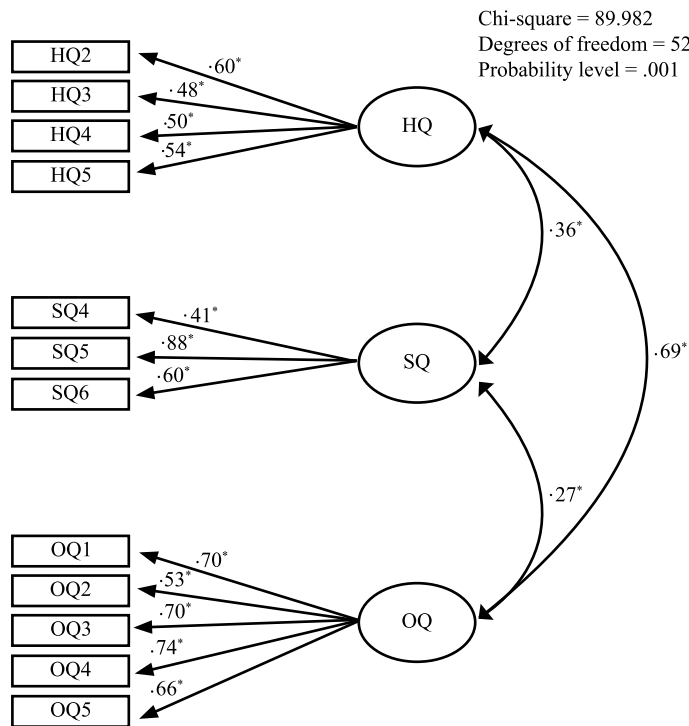
HQ1, 3, 4; SQ1, 2, 3, 4 report standardized regression weights below 0.5, and subsequently, a step-wise deletion of items starting from the lowest standardized regression weight was conducted.

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For instance, SQ1 reports the lowest value (0.16) and hence was discarded first, followed by HQ1, HQ2 and HQ3 in successive stages. Ultimately, the INDSERV model was refined, as depicted in Figure 2. The refined model represents ‘Hoelter’s critical N’ for 0.5 as 160, and 0.1 as 180, which confirms the adequacy of the sample for the model (Hair et al. 2006). However, the refined model (in Figure 2) contains items with low (i.e., HQ3 and SQ4) and marginal convergence validity (i.e., HQ4, HQ5 and OQ2).

Indeed, these items will affect Average Variance Extracted (AVE) and discriminant validity of the latent variables/construct. But the study still wishes to maintain them, as the deletion of further items could seriously affect the content validity of the INDSERV scale. The above results indicate a mismatch of the scale in the South Asian context.

Figure 2: Purified 1st Order Measurement Model for INDSERV



*Factor loadings are significant at 0.05 level

Table 5: Goodness of fit indices of INDSESV

Absolutes				Incremental		
CIMIN/DF	GFI	AGFI	RMSEA	IFI	TLI	CFI
1.730	.940	.910	.060	.947	.931	.946

According to Table 5, the absolute fit indices confirm the fit between the observed data and the model. The RMSEA is within the range of 0.05- 0.08, indicating that badness of fit of the model is negligible (Hair et al. 1998). Then, incremental indices are above 0.9, confirming that the construct fits the baseline model, assuming that all observed variables are uncorrelated (Hair et al. 2006, p.749). Based on the factor loadings reported in the refined model, the convergent and discriminant validity was assessed with the Average Variance Extracted (AVE) and Composite Reliability (CR) accordingly. Table 6 reports CR values with SMC and AVE matrix for Discriminant Validity.

Table 6: Validity and Reliability Summary

Variable	Mean	CR	AVE	SQ	HQ	OQ
SQ	4.56	0.75	0.53	0.53		
HQ	5.31	0.83	0.32	.113	0.32	
OQ	5.56	0.87	0.45	0.78	.476	0.45

The AVE of less than 0.5 shows that, on average, more errors remain in the item than variance explained by the latent factor structure imposed on the measure (Hair et al. 2006). Table 06 shows two variables (HQ=.32, OQ=.45) having lower convergence validity (AVE). In relation to HQ and OQ, they are considered acceptable, as not only the direct paths between these items and their respective latent variables indicate significant p-values, but they could also maintain a satisfactory level of composite reliability (CR). The results in Table 06 indicate good CR values for all dimensions of INDSESV.

With regard to discriminant validity, Hard process Quality (HQ) is weak in discriminating its own items from other constructs. This outcome was expected, as some items of HQ variable do not sufficiently maintain their convergence validity. As noted above, those items are kept in the scale, as it otherwise severely affects content validity.

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The SMC value between HQ and SQ (0.476) is higher than the AVE of Hard process Quality (0.32). This implies that the discriminant validity of Hard process Quality (HQ) is unsatisfactory. With reference to Table 04, there are two items (i.e. HQ 1 and HQ 5) of the dimension loaded into two different factors disturbing the unidimensionality of the HQ. Thus, from the beginning of scale refinement, the scale demonstrated issues of reliability and validity.

Discussion

However, the INDSERV scale was developed in the Western context. In the original study, INDSERV showed satisfactory reliability and validity (Gounaris 2005a). It also reported superior psychometric properties in SERVQUAL (Lee 2011, p. 3180). However, in the present study the scale reported many reliability and validity issues. As a result one dimension as a whole and some items were excluded. This study provides evidence of a contextual mismatch of borrowed scales from a different cultural context. All deleted items are listed in Table 7.

Table 7: Deleted Items in INDSERV Scale

Dimension	Items	Description
Potential Quality	PTQ 1	Offers full service
	PTQ 2	Has required personnel
	PTQ 3	Has required facilities
	PTQ 4	Has required management philosophy
	PTQ 5	Has a low personnel turn-over
	PTQ 6	Uses network of partners/ associates
Hard process Quality	HQ 1	Keeps time schedules
Soft process Quality	SQ 1	Accept agreement enthusiastically
	SQ 2	Listen to our problems
	SQ 3	Opened to suggestions/ideas

According to Table 7, it is clear that the context of the study does not oversee a value of ‘potential quality’ of the vendor in assessing their performance. This might reflect that the context of the study (i.e., Sri Lanka) does not show sufficient concern for future occurrences, and thereby demonstrates the characteristics of the ‘short-term orientation’ nature of developing countries (Hofstade 1984). The reason may be high economic uncertainty in developing countries. Therefore, 22-item INDSERV scale shows a contextual mismatch. Despite these facts, Lee (2011) stated that the dimensions of INDSERV are interconnected.

He empirically justified that soft process quality (SQ) and hard process quality (HQ) are the mediators between potential quality and output quality rather than their independent roles. Among the dimensions remaining in the scale, hard process quality (HQ) shows the highest contribution on the IND SERV ($\beta = 0.98$, $R^2 = 96.5\%$) followed by output quality ($\beta = 0.86$, $R^2 = 74\%$). With reference to the factor loadings in Figure 02, the prominent service quality characteristics of a vendor are: argues when necessary (SQ5, $\lambda = .88$), looks at the focal firm's interests (SQ 6, $\lambda = .81$), have creative offerings (OQ4, $\lambda = .74$), reaches objectives (OQ1, $\lambda = .70$), and contributes to the focal firm image (OQ3, $\lambda = .70$).

Conclusion

The vendors' market is also competitive; hence they have to strive for survival. The IND SERV scale provides general guidelines for vendors about the expectations of the focal firm in the business-to-business context (Gounaris 2005a). But as far as the study context is concerned, not all elements are equally important and valid. Accordingly, vendors in the study context can focus more on the refined elements of the IND SERV scale (in Figure 2). Further, the focal firms (i.e., hotels in this study) are more likely to assess output and soft process quality aspects rather than hard process quality and potential quality in measuring their vendor's service quality performance. The vendors' potential quality however becomes invalid in the hotel sector in Sri Lanka possibly for many reasons such as economic uncertainty, short-term orientation, etc. Anyhow, these factors need to be empirically tested.

Having identified that the findings of this study are limited to the hotel sector in Sri Lanka, future research could validate the IND SERV scale in different contexts with data from different service industries. The present study further recommends performing exploratory studies to discover unique service quality dimensions in the business-to-business context in Sri Lanka. More specifically in-depth interviews and focus group discussions with focal firms and vendors will help find new quality dimensions/aspects. This study highlights the recommendation of the use of localized scales when the research context is considerably different from the context where the scale originated.

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