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Threat orientation in small and medium-sized enterprises

Understanding differences toward acute interruptions

Threat
orientation
in SMEs

583

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Abstract

Purpose – The purpose of this paper is to examine whether the experience, impact and likelihood of an acute business interruption, along with the perceived ability to intervene, influences the “threat orientation” of owner-managers in small- and medium-sized enterprises (SMEs) in the UK. The concept of “threat orientation” is introduced in this study as a way to eschew the binary view of whether an organisation does or does not have processes and capabilities to respond to acute interruptions.

Design/methodology/approach – “Threat orientation” is operationalised and survey data are collected from 215 SMEs in the UK. Data from owner-managers are analysed using multiple regression techniques.

Findings – The results of this study provide empirical evidence to highlight the importance of firm age rather than size as a determinant of the propensity to formalise activities to deal with acute interruptions. Recent experience and the ability to intervene were statistically significant predictors of threat orientation but the likelihood and concern about specific types of threat was not found to positively influence threat orientation.

Research limitations/implications – Although the data are self-report in nature, the respondents in the study are the chief decision and policy makers in their organisations and thus it is essential to understand the influences on their threat orientation. Results are generalisable only to UK SMEs.

Originality/value – The findings of the paper contribute to a nascent understanding of planning for acute interruptions in SMEs and (despite the cross-sectional nature of the study), the findings clearly reinforce the need for continuing longitudinal research into how resilience develops in smaller organisations.

Keywords UK, SMEs, Risk management, Business continuity, Acute business interruptions, Threat orientation

Paper type Research paper

Introduction

Formal planning has been argued to be critical if organisations are to respond and recover effectively from an acute business interruption, but in the context of small- and medium-sized enterprises (SMEs), the underlying perceptions of managers in developing provisions to recover are less well understood. An acute business interruption is a situation in which normal commercial activities are temporarily or permanently inoperable and this bears many features of what would be considered a “crisis” in terms of high impact, ambiguity and the requirement for immediate action (Doern, 2014). In the strategic planning literature, attention is placed not only on the processes for developing corporate strategies, but also on the influence of individual cognition and heuristics on these processes. Despite the claimed importance of planning for acute business interruptions for organisations of all sizes, the association between experiences, perceived vulnerabilities and threat orientation (i.e. the distinctness and formality of preparations for acute business interruptions) is less well understood. Part of the reason for this is that the many



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studies of “crisis management” and “business continuity management” in businesses have sampled on the dependent variable of experience of an acute business interruption and focused on larger enterprises. The different orientations of managers, owners and businesses are well established in areas such as entrepreneurship (Lumpkin and Dess, 1996), learning (Calantone *et al.*, 2002) and market selection (Chang *et al.*, 2014). An understanding of these differences within orientations illuminates our understanding of a spectrum of approaches that are used by managers to address current and future organisational challenges. The introduction of, and examination of the influences on, “threat orientation” in this paper attempts to provide a non-binary measure of what Davison (2014) refers to as “discontinuity planning” but in the specific context of SMEs.

Prior studies of management processes to deal with acute business interruptions in businesses have tended to use the presence of a plan as the indicator of formal activities but in smaller firms, where planning is generally be less formalised, such a measure produces a binary view of whether a business does or does not have processes and capabilities to address acute business interruptions. Belatedly, a smaller firm view has emerged and this paper extends our understanding of the smaller-business context through empirical tests that provide an explanation for the adoption of formal planning for acute business interruptions (many of which are triggered by natural hazards). Furthermore, an understanding of threat orientation is important to our understanding of entrepreneurial behaviour (both prior to and during an acute business interruption), and further understand how the needs of SMEs may differ from larger enterprises. The focus of this paper on threat orientation (i.e. the distinctness and formality of preparations for acute business interruptions) is not because it is claimed here to be superior to unplanned adaptive responses but rather that we still have only a limited understanding of planning for crises in smaller firms. Moreover, many smaller firms are coming under increasing pressure to have plans to deal with crises (whether this is from a standards certification standpoint) or because policy makers claim it is good practice.

Our understanding of the influences on SME owners to adopt formal planning remains underdeveloped (Blackburn and Kovalainen, 2009) but given the economic importance of SMEs coupled with their potential vulnerability to both natural hazards and man-made failures, a closer examination of these influences becomes necessary given the claimed benefits of formal planning for these acute business interruptions. Not only are many smaller businesses highly reliant on their locality for a large proportion of trade, and their income and inputs, they are claimed to be more vulnerable to the impact of an acute business interruption (Battisti and Deakins, 2012; Corey and Deitch, 2011; Herbane, 2013). This study examines whether the experience, impact and likelihood of an acute business interruption, along with the perceived ability to intervene, influences the threat orientation of owner-managers in SMEs.

The paper is structured as follows. In the next section we consider prior research that examines the impact and nature of acute business interruptions in SMEs, along with a review of prior empirical work that has examined the nature of formal planning in SMEs, whether for strategic purposes or to respond to an acute business interruption. From this, three hypotheses are presented and the paper then proceeds to explain the research design prior to the presentation and discussion of the results alongside consideration of the implications of the study for business owners, policy makers, and support agencies.

Background

SME vulnerability, experience and impact

The impact of acute business interruptions on SMEs is beyond doubt – not least given the continuing importance of SMEs in terms of economic growth, employment, innovation and opportunities for economic migrants and Black and Minority Ethnic groups (Lukács, 2005; Ram *et al.*, 2013). Some recent cases highlight the spread of impact on SMEs. Following the magnitude 6.3 earthquake that struck L'Aquila city and province in April 2009, the centre of the central Italian city remained cordoned off for several years following damage to an estimated 10,000 commercial and residential properties (Baldini, 2013). After the devastation of Hurricane Sandy hitting the eastern USA in 2012, up to 30 per cent of the 60,000 plus small businesses affected would cease trading within a year (Crespin, 2013). In the UK, 70 per cent of businesses in Somerset (southwest England) were affected by flooding in early 2014, with an average fall in sales of a quarter (Anon, 2014). The broader economic scale and impact of flooding events on small businesses is demonstrated by the severe flooding in Thailand during mid-late 2011 during which an estimated 550,000 small businesses were affected, resulting in a halving in GDP growth from SMEs during this period (Thai Business Council, 2011). Despite these vulnerabilities, evidence shows that SMEs lag behind large business in their adoption of formal business continuity management systems, with rates of adoption falling as organisational size decreases (Musgrave and Woodman, 2013).

Vulnerability. Despite the lack of a substantial and integrated literature on SME vulnerability, a number of studies have identified organisational attributes that might associate with a reduced engagement with formal planning and ability to respond and recover from an acute business interruption. In a re-evaluation of resilience in a community disaster context, Sudmeier-Rieux (2014) noted that those communities that rebuild quickly (thereby demonstrating a degree of resilience in the conventional sense of “bouncing-back”) because of their simple technology and resource requirements remain inherently vulnerable. A parallel could be drawn with SMEs, whereby the comparatively simpler properties of their structures, ownership, decision making and processes mean that they could be rebuilt more easily than those in large enterprises.

Duncan *et al.* (2011) highlight the increasing prevalence of natural hazards alongside evidence of resulting organisational failure that results from delays in re-opening or from the ongoing problems that arise from damaged tangible and intangible resources, such as cash flow, market share and supply chain integrity. Véronneau *et al.* (2013) found that low levels of inventory and slack in organisations resulted in heightened fragility, thereby raising vulnerability to internal and external failures in supply transportation, freight, facilities, communications and human resources. This association between slack and vulnerability corresponds with Perrow's (1984) tight coupling of system specifics and the normality of an accident. Corey and Deitch (2011, p. 175) added that “Larger organizations [...] typically have more capital and resources to draw from post-disaster recovery”.

Battisti and Deakins (2012) reported high rates of impact on small businesses in New Zealand, along with high levels of vulnerability and low levels of formality with regard to planning for business continuity. Correspondingly, in a recent study of SMEs in the UK (Blundel *et al.*, 2014), 27 per cent of these businesses had faced extreme weather whereas 44 per cent of the same businesses had been affected by the recent economic downturn and unstable market conditions. When asked about their actions to improve the resiliency and robustness of the business, changes to the corporate strategy in terms of

markets served, product/service changes, increased workforce flexibility and different financing arrangements represented the response implemented by the vast majority of SMEs, rather than the introduction of formal planning, dedicated activities and structures. This further evidences the low formalisation of crisis planning-related activities and points towards the experience of challenges influencing the management priorities in an SME context (i.e. market challenges addressed through changes to corporate strategies and resourcing arrangements). Therefore, and given that SMEs and their owner-managers are strategically inseparable (the latter representing the core identity, skills, leadership, management and resource of the business), it is hypothesised that:

- H1. An SME owner-manager's recent experience of an acute business interruption is positively related to threat orientation.

Orientations towards planning in SMEs

Planning formalisation in SMEs. A somewhat more evolved understanding of strategic planning in SMEs can be found in the general management literature and may provide indications of the differences in the formalisation and use of planning within smaller organisations. Prospect theory (March and Shapira, 1987) and the influence of recency effects (Hertwig *et al.*, 2004) suggest that the reference points for future courses of actions are shaped by recent choices, successes and failures (McNamara and Bromiley, 1999). The absence of resources and expertise to undertake formalized planning might distinguish the predilection of smaller firms to undertake strategic planning. However, Moyer (1982) and Van Virk and Noonan (1982) argued that the principles of large firm strategic planning activities could be simplified and generate a benefit, at the very least, in drawing attention to where the business is "headed in the absence of planning" (Moyer, 1982, p. 14, original emphasis). Moving beyond the mere presence of planning, stronger performance associated with the quality of plans rather than the amount of time spent on planning itself (Orpen, 1985). Studies of formal planning in SMEs have focused on business development in the form of attaining competitive advantage (Audretsch and Lehmann, 2006), and performance improvement (Lyles *et al.*, 1993). So, whilst scholars have investigated the perceived and actual association between formal planning in a strategic management context, the literature on planning for acute business interruptions in the context of SMEs is far less developed.

Planning for acute interruptions. Research on the practice and prevalence of planning for acute interruptions in small firms is less well evolved than for strategic planning, but we are increasingly cognisant that day-to-day management, experiences, and relationships delineate SMEs from larger firms in the context of preparation and response. SME owner-managers may feel that their day-to-day activities represent a form of crisis-response or issue prevention management (Jaques, 2010; Herbane, 2010), thereby framing "crisis" as an acute situation of a regulatory and proximity nature rather than one that is infrequent and unexpected. Small firm owners may consider formal preparations for acute business interruptions as unnecessary because the firm's capabilities would result in recovery and survival regardless of the prohibitive time and cost requirements of formal preparations (Mikušová, 2013). SMEs have been found to eschew recovery planning because day-to-day priorities are greater than what are perceived to be unlikely events, and because of the deterrent effect of the formality and complexity of planning processes that often originate from large-enterprise management systems (Duncan *et al.*, 2011). As Wedawatta and Ingirige (2012) found for SMEs, business continuity/risk management measures take the

general form of insurance for property damage and business interruption and that following direct experience of a flood, these measures are supplemented by property adaptation measures to reduce the now familiar consequences to the business.

In their study of businesses that recovered from the effects of Hurricane Katrina, Corey and Deitch (2011) reported that fewer than half (43 per cent) of small organisations had an emergency response plan in place (compared with 81 per cent for large firms), and plans were less sophisticated in aspects such as communication with staff. Although small firms were more likely to have encountered inventory loss problems compared with their larger counterparts, the study found that business size was not significantly related to difference in post-Katrina financial performance levels, suggesting that for surviving firms at least, factors other than having an emergency plan would account for the sustenance of performance that is equivalent to larger firms with a greater likelihood of having an emergency plan in place.

Heuristics, experience and firm maturity affect the adoption of enterprise risk management practices (Silva *et al.*, 2013). Spillan and Hough (2003) found that the experience of an acute business interruption in small businesses was associated with an increase in their concern, but that concern *per se* did not result in small firms having formal “crisis management” teams. Small firms are less prepared and more vulnerable than large corporations and, unlike managers in large corporations, the owner-managers of small firms face not only an interruption to their activities, but also “an immediate and indefinite interruption in their income” (Runyan, 2006, p. 25). Jin (2010) found that managers in smaller businesses perceived higher levels of dangers for internal long-term threats because of the limited resources at their disposal (including human resources).

The resource poverty-resilience scarcity nexus for SMEs is not universally accepted. Relationships and structures have also been suggested as surrogates for planning in the case of recovery. Gao *et al.* (2013) found that structural, relational and cognitive social capital influenced the sharing of risk management practices and related skills transfer in SMEs, thereby resulting in the emergence of capabilities in the absence of formal risk management structures. Relational networks are posited as important in SME recovery from acute operational shocks that threaten survival (Pal *et al.*, 2014; Mikušová, 2013). A community location dimension has also been found to positively affect the odds of survival from an acute business interruption in contrast to the impact of federal disaster assistance on the same small family-owned businesses (Haynes *et al.*, 2011). A recognition of a “community-based” narrative for resilience has recently been identified by Aldunce *et al.* (2014). Sullivan-Taylor and Branicki (2011) found that flat structures and tightly woven relationships within SMEs resulted in faster decision making and more flexible responses that confer an agility that cannot necessarily be achieved by larger businesses in an extreme event. In the absence of formal resources for resilience responses, SMEs are argued to be resourceful because of the “capacity of managers to identify potential problems, establish priorities and mobilise resources to avoid damage or disruption” (Sullivan-Taylor and Branicki, 2011, p. 5571).

Therefore, it is hypothesised that:

H2. The perceived likelihood of acute business interruptions is positively related to threat orientation.

and:

H3. The perceived ability of the SME to intervene to reduce or prevent the impact of acute business interruptions is positively related to threat orientation.

Thus, this study asks if and how the experience, impact and likelihood of an acute business interruption, along with the perceived ability to intervene influences the threat orientation of owner-managers in SMEs.

Methodology

The sample frame for this study comprised of 1,000 UK SMEs selected at random from the Bureau van Dijk 2010 FAME database that covers nine million companies in the UK and Ireland. The European Commission definition of an SME was used as the selection criteria for inclusion within the sample frame (a small firm has turnover per annum/balance sheet value of less than €10 million and has fewer than 50 employees, and a medium-sized firm has turnover per annum of no greater than €50 million, a balance sheet value less than €43 million, and between 51 and 250 employees). Data were collected using a mail questionnaire sent to owner-managers as part of a broader study in UK businesses (Herbane, 2013). A total of 215 owner-managers returned the survey, representing a response rate of 22 per cent (accounting for 42 non-contactable businesses within the sample frame). Kolmogorov-Smirnov two sample tests for age and number of employees confirms that the respondents in this study and non-respondents come from the same population.

Dependent variable

Threat orientation. Earlier in the paper threat orientation was posited as the distinctness and formality of preparations for acute business interruptions in contrast to unplanned adaptive responses. Specifically, threat orientation was measured by a composite of scores derived from respondents evaluations of four statements that refer to crises/acute business interruptions on a five-point Likert scale: (1) “a planned response to a crisis is better than an ad hoc response”, (2) “a formal crisis management plan isn’t needed because I have detailed knowledge of the business”, (3) “a business can be made more resilient to a crisis through formal crisis management processes and resources”, and (4) “the day-to-day running of the business involves crisis management”. Items (2) and (4) were reverse coded to produce a measure that would distinguish between firms with an orientation in which it would respond to a serious interruption using “day-to-day” management and those for which the response is determined more so by a formalised threat orientation. The Cronbach’s α for this composite measure is 0.83 (Nunnally, 1978).

Independent variables

Recent experience. This variable is based on the scores given by respondents to indicate whether, in the previous three years, they had experienced acute business interruptions based on physical, personnel, external, natural, or reputational causes. The combined score was used as the measure of recent experience. The Cronbach’s α for this measure is 0.68 (which is only marginally below the suggested level for internal consistency, but the measure has consistent and positive correlations at the item level and for corrected item-total correlations; Briggs and Cheek, 1986).

Perceived likelihood. Taking the five causes of acute business interruptions noted above, respondents were asked to indicate the extent to which each one presented a likely threat to their business (five -point Likert scale ranging from strongly disagree to strongly agree). The composite score produced the measure of perceived likelihood. Cronbach’s α for this measure is 0.74.

Ability to intervene. The ability to intervene is measured by the summed score for each of the five causes of acute business interruptions based on respondents' evaluations (based on a five-point Likert-type scale) of whether they thought it was possible to plan in order to reduce or prevent the impact of the specific cause. The composite score derived provides a measure of the extent to which the respondent believes that they can intervene to change or prevent the outcome. The Cronbach's α for this measure is 0.71.

Control variables

The study uses firm age and firm size (as the logarithmic transformation of the number of employees).

Results and discussion

Table I presents the descriptive statistics and correlation matrix for the dependent and independent variables. Ordinary least squares regression was used to test the three hypotheses indicated above. Variance inflation factor (maximum VIF = 1.19; VIF mean = 1.10) and tolerance values (range between 0.83 and 0.98) were calculated to ensure that results are not confounded by multicollinearity (Hair *et al.*, 1995).

Table II reports the results of the regression analysis (hierarchical). Model 1 reports the control variables (firm age and staff) and explains 12 per cent of the variance in threat orientation. Only firm age makes a unique statistically significant contribution ($B = 0.07$; $p < 0.001$) thereby suggesting that older businesses rather than more recently established ones have a formalised threat orientation. The number of employees does not predict the threat orientation of the business.

Model 2 tests for *H1-H4* and includes the control variable and independent variables. Model 2 explains 26 per cent of the variation in the dependent variable. The positive effect for firm age remains in Model 2. *H1* predicted a positive relationship between threat orientation and the recent experience of an acute business interruption. Model 2 shows that the coefficient of Recent experience is positive and significant ($B = 0.41$; $p < 0.01$), thereby supporting *H1*. While the coefficient for perceived likelihood is significant, there is a negative effect on threat orientation ($B = -0.25$; $p < 0.001$). *H2* (which predicted that perceived likelihood would be positively associated with threat orientation) is therefore not supported by the results displayed in Table II. *H3* predicted a positive association between the ability to intervene in the event of an acute business interruption and threat orientation ($B = 0.37$; $p < 0.001$) and this hypothesis is supported by the results.

Recent experience of an acute business interruption and the ability to intervene contribute most to Model 2 with perceived likelihood contributing less, albeit indicating

| | Mean | SD | 1 | 2 | 3 | 4 | 5 |
|-------------------------|-------|-------|----------|-----------|----------|-------|------|
| 1. Orientation | 10.47 | 1.04 | | | | | |
| 2. Staff | 3.38 | 0.79 | 0.01**** | | | | |
| 3. Age | 15.84 | 20.77 | 0.36**** | 0.15* | | | |
| 4. Recent experience | 6.33 | 1.89 | 0.23*** | 0.01**** | 0.09**** | | |
| 5. Perceived likelihood | 23.14 | 4.51 | -0.21*** | -0.23* | -0.23 | -0.02 | |
| 6. Ability to intervene | 15.38 | 3.58 | 0.28*** | -0.01**** | 0.09**** | 0.04 | 0.30 |

Notes: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; **** $p < 0.10$

Table I.
Descriptive statistics and correlation matrix

Table II.
Results of
hierarchical
regression models of
threat orientation

| Variables | Model 1 | Model 2 | VIF | TOL |
|--|----------|----------|-----|-----|
| Employees | 0.23 | 0.08 | | |
| Firm age | 0.07*** | 0.05*** | | |
| Recent experience | | 0.41** | | |
| Perceived likelihood | | -0.25*** | | |
| Ability to intervene | | 0.37*** | | |
| <i>Model summary</i> | | | | |
| ΔR^2 | 0.13*** | 0.14*** | | |
| R^2 | 0.13 | 0.28 | | |
| Adjusted R^2 | 0.12 | 0.26 | | |
| F | 16.19*** | 15.83*** | | |
| Notes: Unstandardised coefficients are reported; $n = 215$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$ | | | | |

an inverse relationship with threat orientation. Firm age, although demonstrating a significant positive relationship, contributes least to Model 2. The data reveal that the independent variables (recent experience, perceived likelihood, and ability to intervene) explain an additional 14 per cent of the variance in threat orientation. Only one of the control measures (firm age) had a statistically significant effect.

Several implications emerge from the results of this study. First, the findings suggest that SMEs' threat orientation (a measure of owner-managers' proclivity towards formal specific planning for acute business interruptions) is associated with firm age but not with the number of employees. Since age rather than size is the only significant coefficient in Model 1 the imperative to use formal planning as a coordination mechanism as the number of employees grows is not strong. Instead, the age of the business points to the role of the business, history in the accumulation of experience and learning effects that result in a move away from ad hoc responses to developed incident management systems. Such a finding signals a note of caution for discussions and distinctions of firm type (SME vs large enterprise) in examinations of their preparedness for acute business interruptions, since it is entirely conceivable that a firm will remain small- or medium-sized throughout its life and this distinction between new and old firms may prove to be a better delineator of policy and guidance for businesses lacking in resources, expertise and systems for dealing with acute interruptions. Second, the results reported here identify the relative impact of three different explanatory variables on threat orientation (Model 2). The experience of an acute business interruption by the business in the recent past (three years of less) had the strongest association with threat orientation followed by owner managers' perceived ability to intervene to reduce or prevent the impact of specific threats. The inverse coefficient for perceived likelihood produces a counter-intuitive finding whereby, as respondents evaluations of whether acute business interruptions present a specific threat to their business fall, their orientation towards formal planning rises. Is this because there is a "zone of manageability" for threats, beyond which businesses formalised planning is deemed less effectual than an improvised response? Third, the models had relatively small goodness of fit which indicates that factors beyond firm age, experience of an acute business interruption, perceived likelihood and the ability to intervene account for the variance in threat orientation. With the relatively small number of controls and independent variables, a more multidimensional view of the predictors of orientation will offer a way forward in terms of an SME focus.

To varying degrees, the strategic and crisis management-related literatures associate firm size with formalisation of planning (whether strategic or emergency). Overall, the results of the data analysis challenges this bivariate relationship, suggesting that firm age and experience rather than size *per se* (as determined by the number of employees) has a greater influence on the formalisation of planning. With the conflation of firm age with size (i.e. that smaller firms will more likely be a recent start-up venture), studies of SMEs have tended to de-emphasise the older small firm whose threat orientation may be rather more similar to a larger enterprise due to the accumulation of experience and the ability to evaluate the potential to intervene to reduce or prevent the impact of natural hazards and other threats. No prior work in an SME context has demonstrated this empirically and further work is needed to examine how firm age/maturity affects responses and proclivities towards formal planning for acute business interruptions. What specifically does firm age confer on the organisation and its managers that younger firms lack – experience (direct and indirect), opportunities for recursive learning (Elliott and Macpherson, 2010), superior networks and social capital (Nahapiet and Ghoshal, 1998)? Furthermore, for advocates of the importance of planning for crises and SMEs, the results of this research reinforce the need for further work on how SMEs build resilience in spite of or beyond traditional risk/business continuity/disaster recovery planning methodologies and practices.

Conclusion

As Buchanan and Denyer (2013, p. 206) have remarked, crisis management-related research is largely represented by small sample studies and “a qualitative-processual paradigm”, but while this observation is made for studies about acute business interruptions in enterprises of all sizes (but principally large ones), a parallel literature with a smaller firm focus is increasingly shedding light on the circumstances and challenges facing organisations that have traditionally been less of a concern in management studies of how organisations deal with acute business interruptions that are referred to generically as “crisis”. This paper contributes to a more refined understanding of SMEs in regard to the factors that overcome a reluctance to develop distinctive and/or formal provisions for the management of discontinuities that produce an acute business interruption. Threat orientation challenges us to think about the false dichotomy between planning and non-planning firms, and how and the importance of the owner-managers of SMEs in shaping the use and development of specific resources and capabilities to respond to discontinuities.

Previous work on how SMEs resource and organise responses to acute interruptions have emphasised the role of experience and the limitations of size. Vulnerability to natural hazards and other threats, combined with lower rates of formal planning (Corey and Deitch, 2011; Musgrave and Woodman, 2013), along with a higher susceptibility to general business failure in a commercial sense, may result in the portrayal of SMEs as helpless in the face of an acute business interruption. A contrasting perspective is that the pragmatism of resource constraints result in SME owner-managers developing a threat orientation following experience coupled with their ability to intervene to prevent or reduce specific threats, rather than potential impacts. Understanding rather than fear are the key determinants of threat posture. The results from the data indicate that impact or concern (Spillan and Hough, 2003) are not levers that result in SME owner managers moving away from ad hoc responses fashioned around their day-to-day management of their enterprises (Jaques, 2010; Herbane, 2010). Furthermore, this study confirms one further

organisational type in which experience of an acute business interruption (including natural hazards) is associated with a distinctive resource for responding to future threats (in Davison (2014) the type and resource were a University and Business Continuity plan, respectively). Threat orientation is a starting point in moving theory from a dichromatic view (i.e. planning vs non-planning) of how SMEs respond to acute business interruptions through adaptation alone or hybrids of planning and adaptation[1].

As noted earlier, the focus of this paper on formalisation (which can include planning) should not be interpreted as a rejection or disregard for unplanned adaptive responses to a crisis. However, the present study had several practical implications of the study for business owners, policy makers, and support agencies. How do owner-managers arrive at their assessments of the ability to intervene to prevent and/or recover from specific acute business interruptions? Are these derived from prior experiences, or the accumulation of tacit or explicit knowledge about how to recover from specific scenarios based on firm longevity and the passage of time? A longer timeframe of ownership and operation confers the owner-manager with multiple opportunities to learn, monitor, and anticipate threats; notably, three of the four suggested characteristics of resilience (Hollnagel, 2011). These longitudinal opportunities may then influence how owner-managers develop the capabilities to undertake these assessments effectively and, ultimately, how threat orientations develop and evolve over the life-cycle of a business. The study reinforces the need to communicate with providers and consumers of guidance about the importance of how recent experiences provide a basis upon which to evaluate changing requirements to have formal systems and dedicated resources to deal with acute interruptions.

Note

1. The author is grateful to an anonymous reviewer for valuable comments in relation to this point.

References

- Aldunce, P., Beilin, R., Handmer, J. and Howden, M. (2014), "Framing disaster resilience – the implications of the diverse conceptualisations of 'bouncing back'", *Disaster Prevention and Management*, Vol. 23 No. 3, pp. 252-270.
- Anon (2014), "The effects of flooding on Somerset", *Somerset Chamber of Commerce Magazine*, Somerset Chamber of Commerce, March, p. 3.
- Audretsch, D.B. and Lehmann, E. (2006), "Entrepreneurial access and absorption of knowledge spillovers: strategic board and managerial composition for competitive advantage", *Journal of Small Business Management*, Vol. 44 No. 2, pp. 155-166.
- Baldini, L. (2013), "L'Aquila after the earthquake: why flags do not fly", BBC, 25 June, available at: www.bbc.co.uk/news/world-europe-22986058 (accessed 1 December 2014).
- Battisti, M. and Deakins, D. (2012), "Business measure perspectives from New Zealand small firms: crisis management and the impact of the Canterbury earthquakes", report from Business Measure 2011, New Zealand Centre for Small and Medium Enterprise Research, Massey University, Palmerston North, 17 February.
- Blackburn, R. and Kovalainen, A. (2009), "Researching small firms and entrepreneurship: past, present and future", *International Journal of Management Reviews*, Vol. 11 No. 2, pp. 127-148.

- Blundel, R., Baldock, R., Dadd, D., Schaefer, A. and Williams, S. (2014), "Resilience and recovery: SME experiences of extreme weather events and other external threats", paper presented at Institute for Small Business and Entrepreneurship Conference (ISBE), Manchester, 5-6 November.
- Briggs, S.R. and Cheek, J.M. (1986), "The role of factor analysis in the development and evaluation of personality scales", *Journal of Personality*, Vol. 54 No. 1, pp. 106-148.
- Buchanan, D.A. and Denyer, D. (2013), "Researching tomorrow's crisis: methodological innovations and wider implications", *International Journal of Management Reviews*, Vol. 15 No. 2, pp. 205-224.
- Calantone, R.J., Cavusgil, S.T. and Zhao, Y. (2002), "Learning orientation, firm innovation capability, and firm performance", *Industrial Marketing Management*, Vol. 31 No. 6, pp. 515-524.
- Chang, W., Franke, G.R., Butler, T.D., Musgrove, C.F. and Ellinger, A.E. (2014), "Differential mediating effects of radical and incremental innovation on market orientation-performance relationship: a meta-analysis", *Journal of Marketing Theory and Practice*, Vol. 22 No. 3, pp. 235-250.
- Corey, C.M. and Deitch, E.A. (2011), "Factors affecting business recovery immediately after Hurricane Katrina", *Journal of Contingencies and Crisis Management*, Vol. 19 No. 3, pp. 169-181.
- Crespin, R. (2013), "Sandy's big price for small businesses" *Forbes*, 23 January, available at: www.forbes.com/sites/csr/2013/01/23/sandys-big-price-for-small-businesses/ (accessed 1 December 2014).
- Davison, C.B. (2014), "Selected leadership demographics as predictors of continuity planning", *Disaster Prevention and Management*, Vol. 23 No. 3, pp. 243-251.
- Doern, R. (2014), "Entrepreneurship and crisis management: the experiences of small business during the London 2011 riots", *International Small Business Journal*, doi: 10.1177/0266242614553863.
- Duncan, W.J., Yeager, V.A., Rucks, A.C. and Ginter, P.M. (2011), "Surviving organisational disasters", *Business Horizons*, Vol. 54 No. 2, pp. 135-142.
- Elliott, D. and Macpherson, A. (2010), "Policy and practice: recursive learning from crisis", *Group and Organization Management*, Vol. 35 No. 5, pp. 572-605.
- Gao, S.S., Sung, M.C. and Zhang, J. (2013), "Risk management capability building in SMEs: a social capital perspective", *International Small Business Journal*, Vol. 31 No. 6, pp. 677-700.
- Hair, J.F. Jr, Anderson, R.E., Tatham, R.L. and Black, W.C. (1995), *Multivariate Data Analysis with Readings*, 4th ed., Prentice Hall, Englewood Cliffs, NJ.
- Haynes, G.W., Danes, S.M. and Stafford, K. (2011), "Influence of federal assistance on family business survival and success", *Journal of Contingencies and Crisis Management*, Vol. 19 No. 2, pp. 86-98.
- Herbane, B. (2010), "Small business research – time for a crisis-based view", *International Small Business Journal*, Vol. 28 No. 1, pp. 43-64.
- Herbane, B. (2013), "Exploring crisis management in UK small- and medium-sized enterprises", *Journal of Contingencies and Crisis Management*, Vol. 21 No. 2, pp. 82-95.
- Hertwig, R., Barron, G., Weber, E.U. and Erev, I. (2004), "Decisions from experience and the effect of rare events in risky choice", *Psychological Science*, Vol. 15 No. 8, pp. 534-539.
- Hollnagel, E. (2011), "Prologue: the scope of resilience engineering", in Hollnagel, E., Pariès, J., Woods, D. and Wreathall, J. (Eds), *Resilience Engineering in Practice: A Guidebook*, Ashgate, Farnham, pp. xxix-xxxix.

- Jaques, T. (2010), "Embedding issue management as a strategic element of crisis prevention", *Disaster Prevention and Management*, Vol. 19 No. 4, pp. 469-482.
- Jin, Y. (2010), "The interplay of organization type, organization size, and practitioner role on perceived crisis preparedness: a cognitive appraisal approach", *Journal of Contingencies and Crisis Management*, Vol. 18 No. 1, pp. 49-54.
- Lukács, E. (2005), "The economic role of SMEs in world economy, especially in Europe", *European Integration Studies*, Vol. 1 No. 4, pp. 3-12.
- Lumpkin, G.T. and Dess, G.G. (1996), "Clarifying the entrepreneurial orientation construct and linking it to performance", *Academy of Management Review*, Vol. 21 No. 1, pp. 135-172.
- Lyles, M.A., Baird, I.S., Orris, J.B. and Kurato, D.F. (1993), "Formalized planning in small business: increasing strategic choices", *Journal of Small Business Management*, Vol. 31 No. 2, pp. 38-50.
- McNamara, G. and Bromiley, P. (1999), "Risk and return in organizational decision making", *Academy of Management Journal*, Vol. 42 No. 3, pp. 330-339.
- March, J.G. and Shapira, Z. (1987), "Managerial perspectives on risk and risk taking", *Management Science*, Vol. 33 No. 11, pp. 1404-1418.
- Mikušová, M. (2013), "Do small organizations have an effort to survive? Survey from small Czech organizations", *Ekonomika istraživanja – Economic Research*, Vol. 26 No. 4, pp. 59-76.
- Moyer, R. (1982), "Strategic planning for the small firm", *Journal of Small Business Management*, Vol. 20 No. 2, pp. 8-14.
- Musgrave, B. and Woodman, P. (2013), *Weathering the Storm – The 2013 Business Continuity Management Survey*, Chartered Management Institute, London.
- Nahapiet, J. and Ghoshal, S. (1998), "Social capital, intellectual capital, and the organizational advantage", *Academy of Management Review*, Vol. 23 No. 2, pp. 242-266.
- Nunnally, J.C. (1978), *Psychometric Theory*, 2nd ed., McGraw-Hill, New York, NY.
- Orpen, C. (1985), "The effects of long-range planning on small business performance: a further examination", *Journal of Small Business Management*, Vol. 23 No. 1, pp. 16-23.
- Pal, R., Torstensson, H. and Mattila, H. (2014), "Antecedents of organizational resilience in economic crises – an empirical study of Swedish textile and clothing SMEs", *International Journal of Production Economics*, Vol. 147, Part B, pp. 410-428, available at: www.sciencedirect.com/science/article/pii/S0925527313001217.
- Perrow, C. (1984), *Normal Accidents. Living With High Risk Technologies*, Princeton University Press, Princeton, NJ.
- Ram, M., Jones, T., Edwards, P., Kiselincev, A., Muchenje, L. and Woldeesenbet, K. (2013), "Engaging with super-diversity: new migrant businesses and the research policy nexus", *International Small Business Journal*, Vol. 31 No. 4, pp. 337-356.
- Runyan, R.C. (2006), "Small business in the face of crisis: identifying barriers to recovery from a natural disaster", *Journal of Contingencies and Crisis Management*, Vol. 14 No. 1, pp. 12-26.
- Silva, E.S., Wu, Y. and Ojiako, U. (2013), "Developing risk management as a competitive capability", *Strategic Change*, Vol. 22 Nos 5-6, pp. 281-294.
- Spillan, J. and Hough, M. (2003), "Crisis planning in small businesses: importance, impetus and indifference", *European Management Journal*, Vol. 21 No. 3, pp. 398-407.
- Sudmeier-Rieux, K.I. (2014), "Resilience – an emerging paradigm of danger or of hope?", *Disaster Prevention and Management*, Vol. 23 No. 1, pp. 67-80.
- Sullivan-Taylor, B. and Branicki, L. (2011), "Creating resilient SMEs: why one size might not fit all", *International Journal of Production Research*, Vol. 49 No. 18, pp. 5565-5579.
- Thai Business Council (2011), "Floods affect international rice supplies", available at: www.tbcaue.com/news4.html (accessed 1 December 2014).

-
- Van Virk, J.E. and Noonan, K. (1982), "Key factors in strategic planning", *Journal of Small Business Management*, Vol. 20 No. 3, pp. 1-7.
- Véronneau, S., Cimon, Y. and Roy, J. (2013), "A model for improving organizational continuity", *Journal of Transportation Security*, Vol. 6 No. 3, pp. 209-220.
- Wedawatta, G. and Ingirige, B. (2012), "Resilience and adaptation of small and medium-sized enterprises to flood risk", *Disaster Prevention and Management*, Vol. 21 No. 4, pp. 474-488.

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