Business resilience in an SME context: A literature review

July 2018

Business resilience in an SME context:
A literature review

Maria Wishart

Enterprise Research Centre and Warwick Business School

Maria.Wishart@wbs.ac.uk

www.enterpriseresearch.ac.uk

ABSTRACT

Business resilience research is a burgeoning field, despite the absence of a widely agreed definition of the concept. This review offers a brief overview of the main elements offered in definitions of business resilience to date, and proposes one that combines them. It goes on to present an overview of three broad streams of general business resilience research, which explore employee strengths as a source of resilience, business models and processes that are asserted to contribute to resilience, and organisational efforts to anticipate, prevent and respond to adversity. It identifies the empirical exploration of theoretical ideas emerging from research to date as a recommended focus for future research, including the link between individual and organisational resilience, the strategic initiatives and interventions which may help organisations to develop resilience and the link between contextual factors and resilience. This review also finds that resilience research with an SME focus is a limited but emergent field. Research into SME resilience to date has tended to focus upon the characteristics and capabilities of SMEs, and on the resilience of the leader of an SME, and the connection it may have to the resilience of the organisation. Researchers have also begun to consider interventions that might impact on the resilience of these organisation. The review concludes that further focus on such interventions is likely to deliver practical guidance for SMEs endeavouring to be more resilient. It also identifies gaps in the research, and offers three further foci for future SME resilience research to address them. Firstly, contextual aspects unique to SMEs that may work to their advantage in developing resilience should be explored. Secondly, the link between leader resilience and organisation resilience should be interrogated and elucidated, and finally, the connection between SME resilience and the organisation's geographical location should be investigated.

CONTENTS

1. INTRODUCTION

This review evaluates the current state of business resilience literature, with a particular emphasis on research with a small business focus. Literature from both academic and 'grey' sources are included, with the aim of extending the focus beyond academia, to include research and inputs from a range of stakeholders. The review seeks to answer the following questions:

General business resilience research

- How has research to date defined business resilience? How *should* we define it?

- How have individual and organisational resilience been measured?

- What are the main themes emerging from general business resilience literature?

Resilience research in a small and medium sized enterprise (SME) context

- What are the main themes emerging from business resilience research in an SME context? Specifically:

  o What kind of adversity do SMEs typically experience?

  o What enables and discourages SME business resilience in the face of adversity?

  o What impact does the individual resilience of SME business leaders have upon the resilience of their organisations?

  o What has research to date identified about the link between an SME's resilience and its location?

Relatively little resilience research has focused upon the specific context of small and medium sized enterprises (organisations with fewer than 250 employees as defined by the European Union), which is perhaps surprising given the extent of the contribution made by these business organisations. According to European Union (2015) statistics, SMEs account for 99% of enterprises, two thirds of employment and 57% of value added in the European Union. Understanding what makes these organisations resilient is clearly something which ought to be of interest to a wide range of stakeholders, including SME owners and

employees, their customers and suppliers, policy-makers and government and non-government agencies with an interest in the job and wealth creation that these organisations can deliver. Ates and Bitici (2011) note that 'there has been an implicit assumption that organisational theories, processes and conceptual frameworks developed through researching large organisations are relevant and directly applicable to SMEs' (p5604). Nevertheless they point to significant differences in the way that SMEs run their businesses and adopt theories compared to larger organisations. With a strong focus on resilience research that has specifically considered the unique SME context, this review aims to establish what we know about resilience in SMEs and to identify the gaps in our knowledge that still need to be addressed.

2.   STRUCTURE OF THIS REVIEW

The review begins by outlining the different ways in which research to date has characterised business resilience, and by drawing on these characterisation to propose a combined definition of the concept. It proceeds with an overview of the ways in which researchers and others have attempted to measure resilience, before going on to provide a brief summary of the three main streams of general business resilience research that have emerged over the past two decades. The focus then shifts to research that has examined resilience in SMEs. Having briefly considered the different kinds of adversity that SMEs experience, the main themes in this emergent research stream are elaborated, and gaps and future research directions are identified.

3.   DEFINING RESILIENCE

Sutcliffe and Vogus (2003) note that the concept of resilience, whether used in the context of individuals or organisations, is generally founded on the notion of performing well, combined with the idea of difficult circumstances threatening to jeopardize such performance. Resilience, they say, is thus often said to involve the 'maintenance of positive adjustment under challenging conditions' (p95). This is often articulated as bouncing back from adversity (Williams et al, 2017) but also as having the ability to '…anticipate, avoid, and adjust to shocks in their environment' (Ortiz de Mandojana and Bansal, 2015). Despite this apparently common foundation, however, different perspectives have adopted different approaches to the definition of resilience in a business context, some with a focus on the individuals within an organisation, and some with a focus on the organisation itself and its characteristics.

These different perspectives are now outlined.

3.1 The characteristic perspective versus the developmental approach

Sutcliffe and Vogus (2003) distinguish between two main approaches to the definition of resilience. The first emphasises *characteristics* of individuals or organisations, which allow them to continue to perform under difficult circumstances or to recover from shocks, while the second approach views resilience from a more *developmental* perspective. Whereas the characteristic approach to resilience emphasises the inherent ability of individuals or organisation to maintain their performance levels under challenging circumstances, or to regain them after unexpected events, the developmental approach offers a view of a more ongoing process. On the developmental account, shocks and challenging circumstances can provoke the emergence of resilience, evidenced by an increasing ability to respond to and, crucially, to emerge stronger from, these difficult experiences. This can apply to both individuals and to organisations. The developmental perspective thus offers a view of resilience as the ability of an individual or organisation to bounce back from adversity stronger and more capable that they were prior to it. For Sutcliffe and Vogus (2003) the appeal of a developmental perspective is that it captures the idea of resilience as 'relative, emerging and changing in transaction with specific circumstances and challenges' (p97). Their proposed definition adopts this perspective: '…resilience is the capacity to rebound from adversity strengthened and more resourceful'.

3.2 Resilience and temporality

This distinction between resilience as a set of characteristics present in individuals or organisations which permits them to return to stability following an event, and resilience as a process through which they learn from the experience and become stronger and more capable of withstanding future shocks is expressed by others including Williams et al (2017). These authors also reflect on the 'moment' of resilience and on whether it is present beforehand, in the ability to anticipate a crisis, or afterwards, in the capacity to recover from one. Resilience is, they contend, about being able to navigate turbulent circumstances without submitting to them, and they offer a definition of resilience as '…the process by which an actor (i.e., individual, organisation or community) builds and uses its capacity endowments to interact with the environment in a way that positively adjusts and maintains functioning prior to, during and following adversity' (p742). In this way, they assert that

resilience does not occur in a specific 'moment' but is continually present.

3.3 Resilience as transformational

Legnick-Hall et al (2011) also distinguish between resilience as an ability to return to an original state, and resilience as a route to developing new capacities, through which an organisation can transform itself and emerge stronger and better equipped to compete with others. Their definition reflects this. Resilience is 'a firm's ability to effectively absorb, develop situation-specific responses to, and ultimately engage in transformative activities to capitalize on disruptive surprises that potentially threaten organization survival' (p244). These authors argue that the concept of resilience has elements in common with organisational capacities such as flexibility, adaptability and agility, but that resilience is distinctive because of its unique foundation in the need to respond to unexpected and often hugely impactful events, and because of its consequences which can include a significant transformation of the organisation.

3.4 Resilience as a strategic objective

The transformational approach has much in common with the idea that resilience should be a strategic initiative which is linked to the quest for competitive advantage (Sheffi and Rice, 2005; Teixeira and Werther, 2013). For Teixeira and Werther (2013) for example, resilience is evident in the way that organisations respond to changes – firms that anticipate events and changes and act to mitigate them in advance, and that do so repeatedly, are truly resilient. In this way, resilience is seen as closely allied with competitive advantage, and building a resilient organisation is presented as a strategic imperative.

3.5 A combined definition

Defining resilience with recourse to organisational characteristics alone fails to take account of positive potential outcomes, such as increased competitive advantage, that the developmental definitions emphasise. Incorporating the idea of an ongoing process, through which organisations develop resources and skills that allow them to anticipate and mitigate challenging circumstances, allows the notion of a firm as emerging stronger from adversity to be captured. Denyer (2017) talks of resilience as '…a strategic objective intended to help an organisation survive and prosper. A highly resilient organisation is also more adaptive,

competitive, agile and robust than less resilient organisations'. While this description combines conceptualisations of resilience as a collection of characteristics, and as a strategic goal with the potential to deliver competitive advantage, it does not reflect the developmental perspective present in Sutcliffe and Vogus' (2003) definition. Bringing together the ideas of Denyer with those of Sutcliffe and Vogus allows for a definition of resilience that incorporates all elements outlined above – characteristics, the developmental thesis, the notion of resilience as a strategic aim, and the idea of organisations emerging stronger from adversity:

'Resilience is a strategic objective intended to help an organisation survive and prosper. A highly resilient organisation is more adaptive, competitive, agile and robust than less resilient organisations and rebounds from adversity strengthened and more resourceful'.

4.   MEASUREMENT OF RESILIENCE

The diversity of definitions of the concept of resilience has driven the development of a range of scales to measure it, which perhaps explains why widespread consensus on how to operationalise resilience has not been achieved (Windle et al, 2011). From the early 2000s attempts were made to measure individual resilience, usually in clinical and not organisational settings (Mallak and Yildiz, 2016). Analysis of individual resilience is therefore better developed than that at the level of the business (see below). The most widely used instrument for individual resilience measurement is the Connor-Davidson Resilience Scale, with 25 data items. For detail on the items included in this scale, see appendix 1. The scale has been used in different populations, cultural and linguistic contexts and has proved statistically valid. In a methodological review of nineteen resilience scales, the Connor-Davidson scale received the highest psychometric ratings, was the only one to have been used to assess change following an intervention, and was the one which scored highest on total quality assessment (Windle et al, 2011). The more recently developed and shorter version of the Connor-Davidson Resilience Scale (see appendix 2), with 10 data items instead of 25, is also available and may be more straightforward to use for survey research (Campbell-Sills and Stein, 2007). This version of the scale has also been tested in different contexts and its validity confirmed (e.g., Lauridsen et al, 2017).

Several attempts have been made to develop an instrument capable of measuring organisational resilience, although they have operationalised the concept in different ways.

For example, a six item scale developed by Mallak (1998) was extended by Somers (2009) to include four further items, before being updated by the original author (Mallak and Yildiz, 2016). Lee, Vargo and Seville (2013) have developed a survey tool designed to assess and evaluate the effectiveness of organisational resilience strategies. However, the challenges associated with the diversity of organisations and their environments, combined with lack of consensus on what organisational resilience looks like (Linnenluecke, 2017) mean that a widely adopted instrument has not yet emerged.

5. BUSINESS RESILIENCE RESEARCH TO DATE

5.1 Introduction

Resilience in a business context has its roots in two influential academic papers by Staw et al (1981) and Meyer (1982), both based on studies into the responses of organisations to external threats. The concept of 'resiliency' was first used in this context by Meyer (1982, p516) who identified it as one of two possible adaptive organisational responses to external threats. The two papers offered divergent findings, with Staw et al arguing that external threats can provoke inflexible responses and thus endanger the survival of the organisation, and Meyer asserting that organisations are likely to display adaptability in response to such threats. Following this early work, from the mid-1980s to the end of the 1990s, the focus of scholarship in business resilience shifted away from external threats and towards those internal to the organisation, driven by a series of large scale, high-profile industrial accidents and disasters (Linnenluecke, 2017). The emphasis in this phase was on the achievement of high reliability organising, with the aim of identifying strategies for error-free operation in technologically complex environments, and studies were underpinned by concepts including normal accident theory (Perrow, 1984, in Linnenluecke, 2017) and collective mind (Weick,1993). Around the turn of the century, the focus of resilience research shifted back to the external, driven by fears around terrorism, global security and climate change and their implications for organisations' functioning. Emphasis in this phase has largely been on preparing for and responding to adversity, organisational capabilities as sources of resilience and the impact of different business models on business resilience (Linnenluecke, 2017).

5.2 Streams of business resilience research

Three broad streams of academic business resilience research have emerged over the past two decades. The first examines employee strengths as a source of resilience. The second focuses on business models and processes, including research that addresses the development of resilient supply chains. The third considers organisational efforts to anticipate, prevent and respond to adversity. A brief summary of the main ideas from each stream now follows.

5.2.1 Employee focused resilience research

Resilience research with an employee focus has its origins in psychological scholarship, and generally attempts to identify individual traits and capabilities which might be nurtured to form the basis of organisational resilience (Coutu, 2002; Luthans, 2002). Employee-focused resilience research encompasses two subtly different approaches. The first attempts to identify correlations between resilient employees and organisational resilience, with the aim of demonstrating that resilient employees foster resilient organisations, while the second seeks to identify more general employee characteristics which can be correlated with resilience at the organisational level. An example of the first strand is the Psychological Capital (PsyCap) measure, developed by Luthans et al (2007) as a way of measuring individual strengths. This measure advances resilience as one of four personal factors (along with self-efficacy, optimism and hope) that are linked to positive organisational outcomes. Subsequent empirical studies have found correlations between these factors and organisational outcomes, including a positive relationship with happiness, commitment and performance (Youssef and Luthans, 2007), and a negative relationship with employees stress (Avey et al, 2009), although these studies operationalise the concept in different ways. Research also indicates that along with other PsyCap factors, resilience can be learned and nurtured through a variety of interventions including web-based training (Britt et al, 2016; Lengnick-Hall et al, 2011). Again, lack of consensus on the operationalisation of the concept of resilience means that these studies cannot categorically be said to be measuring identical phenomena, and the validity of psychological capital as a higher order construct has also been called into question, with scholars arguing for independent consideration of the core factors to assess their relative importance (Newman et al, 2017).

As noted above, the second approach to employee-focused resilience research tries to identify more general individual characteristics related to resilience, and in a review of

resilience research, Williams et al (2017) identify four kinds of capabilities observed in employees which have been found to 'enable adjustment to adversity' (p742) and thus to influence resilience. Cognitive capabilities include the ability in individual employees to identify potential disruptions and to respond in appropriate ways. This includes, for example, the ability to assimilate new information quickly in order to make sense of new circumstances (e.g., Weick and Sutcliffe, 2006). Behavioural capabilities include individuals' tolerance for uncertainty, and their ability to learn to co-operate and work within teams. An individual's capacity to regulate their own emotions, and to build social networks of trusted colleagues were also found to contribute positively to an organisation's ability to withstand shocks, and to emerge stronger from adversity (Williams et al, 2017).

5.2.2 Research focused on business models and processes

Researchers have considered the influence that an organisation's business model may have on the impact of adverse circumstances and events. These may include, for example, natural disasters, supply chain disruptions, terrorist attacks and industrial accidents. A number of enabling factors that can potentially increase the likelihood of positive outcomes following such events have been identified, including broader information processing and the loosening of controls (Sutcliffe and Vogus, 2003) the presence and use of financial slack (Sutcliffe and Vogus, 2003; Gittell et al, 2006; Bradley et al, 2011), and continuous innovation (Hamel and Valikangas, 2003). Empowering a wider group of managers by extending involvement in, and responsibility for, business continuity planning beyond a central core group has also been advanced as a route to resilience (Alesi, 2008; Woodman et al, 2010). The effects of the implementation of sustainable leadership practices (Avery and Bergsteiner, 2011) and of responsible social and environmental practices (Ortiz-de-Mandojana and Bansal, 2016) on business resilience have been examined and found to be significant. The idea that over-organisation can be detrimental to an organisation's resilience has been considered (Van de Walle, 2014), and Limnios et al (2014) distinguish between adapting to shocks and resisting them arguing that, depending upon circumstances, both adapting and resisting can constitute effective strategies for resilience. Contending that resilience is about developing the right culture to navigate adversity, rather than endlessly planning for unknown future shocks, Koronis and Ponis (2018) argue for preparedness, responsiveness, adaptability and learning abilities as key strategies embraced by resilient organisations.

Research focusing on supply chain resilience has sometimes been seen as a distinct strand of inquiry, perhaps because the supply chain is largely external to the organisation

(Linnenleucke, 2017). In fact, it has much in common with research that examines organisational processes and business model. For example, scholars have advanced principles such as increasing flexibility, building in redundancy or slack to supply chains (Sheffi and Rice, 2005) and creating more agile supply chains through greater openness and collaboration with supply partners (Christopher and Peck, 2004). These studies, along with the majority of research into supply chain resilience, are conceptual, but empirical studies have also delivered insights. Jüttner and Maklan (2011), for example, identify four supply chain resilience capabilities – flexibility, velocity/reaction speed, access to timely information and collaborations – which are correlated with resilience, and Craighead et al (2007) identify structural elements of supply chains, notably their complexity and density, which they find are linked to the severity of disruptions that follow a shock.

5.2.3 Resilience research focused on anticipating, preventing and responding to disruptions

Preparation for adversity, and the proactive management of risks in anticipation of disruptive events has been a further focus for resilience research. Legnick-Hall and Beck (2005) advance the notion of resilience capacity, a combination of cognitive, behavioural and contextual factors which combine to allow it to identify threats, and then develop responses and mobilize resources to react to them. Resilience capacity develops over time, and often in response to experiences of adversity. Boin and van Eten (2013) distinguish between *precursor resilience*, in which developing problems are contained to avoid major escalation, and *recovery resilience*, in which an organisation responds to, and bounces back from, a shock. Focusing on the former, they argue that an organisation needs to be both highly structured and, at the same time, able to improvise when required to be able to identify and respond to threats. This approach resonates somewhat with Denyer's (2017) assertion that continuous improvement of existing systems requires a different approach to dealing with the big challenges and issues that organisations face.

Developing networks, both within and among organisations, to allow for the efficient co-ordination of efforts in the event of challenges, has been found to reduce the extent and duration of negative effects following predictable and well-understood adverse events (Van der Vegt et al, 2015). Developing virtual communities of practice (Gimenez et al, 2017) and liaising with other organisations in their networks to develop contingency plans for anticipated challenges (Seville, 2008) are also advanced as strategies to help anticipate and respond to potential adversity. For less predictable events, research shows that organisations that invest

in systems and structures to enable the early identification of challenges are likely to demonstrate high resilience (Williams et al, 2017). Such initiatives may imply the allocation of resources or the use of daily practices and routines to ensure that problems are noted.

Developing a balance between strict protocol adherence and improvised responses in the face of disruptive events, along with the capacity to distinguish when each is appropriate, has been asserted as a key factor in building organisational resilience (Williams et al, 2017). In the face of such an event, researchers have identified a range of responses that resilient organisations are more likely to display. These often depend on the cognitive and behavioural reactions of individual employees (see above), but for individual reactions to succeed, organisation-level factors such as the ability to mobilize resources quickly, through flexible decision-making processes, can make the difference between success and failure, and prior experience of adversity has been identified in a number of studies as an individual-level factor likely to improve organisational responses to adversity (Williams et al, 2017).

5.3 General business resilience research: conclusions

Research examining resilience in a business context has addressed a variety of subjects, including the resilience of employees and the way that this may influence resilience of an organisation, and the part that a business's models and processes may play in its ability to withstand adversity. Researchers have also contemplated organisational strategies aimed at forestalling and responding to shocks. It is fair to say, however, that much of this work has had a theoretical focus, and a future focus on empirically exploring these ideas would perhaps deliver insights that could inform policy and practice. In particular, examining more closely the link between individual and organisational resilience, on the strategic initiatives and interventions which may help to underpin organisational resilience and on contextual factors and the link with resilience would address the evident gaps in general resilience research to date (Linnenluecke, 2017; Annarelli and Nonino, 2016; Bhamra et al, 2015).

6.   RESILIENCE RESEARCH WITH AN SME FOCUS

Although SMEs are often under-prepared for crises and can suffer disastrous consequences when they experience them, both empirical and theoretical research examining organisational resilience has traditionally focused upon larger businesses and their environments (Sullivan-Taylor and Branicki, 2011). Resilience research into small business

organisations is relatively rare (Battisti and Deakins, 2015; Conz et al, 2015) and has been identified as a potential focus for future resilience scholarship (Annarelli and Nonino, 2016).

6.1 SMEs and adversity

Literature to date contemplates a range of factors that may test the resilience of SMEs. These include economic recession (e.g., Bullough and Renko, 2013; Amman and Jassaud, 2010), environmental events including short-term weather-related events (e.g., Battisti and Deakins, 2017; Ingirige et al, 2008), longer-term environmental factors such a global warming (Korber and McNaughton, 2017), man-made disasters such as oil spills (Williams et al, 2017), terrorist attacks (e.g., Herbane, 2010), reputational damage, fraud and regulatory issues (e.g., Lee et al, 2013), cyber crime and information theft (e.g., Herbane, 2010) and supply-chain disruptions (e.g., Craighead et al, 2007). Often, apparently distant external events can provoke unanticipated consequences for businesses, such as a sudden drop in sales or resources (Linnenluecke, 2017). Clearly the nature of adversity is highly variable, and this variability is likely to influence the ways in which an SME is able, and chooses, to respond (Lee et al, 2013).

6.2 Streams of SME resilience research

The limited amount of research that has been published with an SME resilience focus can be separated into three main strands. A number of studies consider the ways in which the characteristics and capabilities of SMEs themselves may be linked to their resilience. The resilience of the leader of an SME, and the connection it may have to the resilience of the organisation, is also examined as are interventions designed to increase the resilience of these businesses.

6.2.1 SME characteristics and capabilities

Planning for adversity has been the focus for a number of studies. Sullivan-Taylor and Branicki (2011) apply a resilience framework developed by Weick and Sutcliffe (2001, in Sullivan-Taylor and Branicki) which advances four categories of capabilities that an organisation's management requires for resilience (resourcefulness, technical, organisational and rapidity) and find that SMEs fall short in all but rapidity. They assert that SME managers exhibit a tendency to 'muddle through', reflecting limitations in their capabilities related to planning and preparing for adversity, and maintaining technical systems, but that the nature

of the environment that many faced on a daily basis means that they are generally good at taking decisions quickly in the face of challenges. This is in part attributed to the more precarious situation, in terms of uncertainty and resource constraints, that many SMEs experience on a daily basis compared to larger organisations. Reymen et al (2015) argue that being flexible and rapidly responsive allows SMEs to deal with uncertainty in an effective manner, asserting that, this can be an effective approach to crisis management. Herbane (2010) observes a similar tendency in SMEs in relation to crisis management planning, arguing that managers in small organisations tend to firefight in the face of crises rather than to proactively plan in advance for them. He attributes this to an attitude prevalent in SMEs that planning for crises is aspirational and potentially costly, but argues that to increase their resilience, small organisations need to invest in resilience to reduce their vulnerability. Similarly, Battisti and Deakins (2017) offer empirical evidence to support their contention that an SME's dynamic capabilities, specifically their proactive attitude and ability to mobilise and integrate external resources in the event of shocks, are key to its ability to withstand such events. As such, these capabilities are central to an SME's resilience, and in order to foster them, organisations need actively to prepare for adversity, by developing contingency plans, by building networks and by critically examining their adaptive behaviours.

Ates and Bitici (2011) argue that the ability to manage change effectively is an essential precursor of resilience. They offer empirical evidence for their assertion that change management capabilities in SMEs are often constrained by behavioural and organisational characteristics, notably by a consistently short-term focus which drives reactive behaviour, and a tendency to ignore the longer term strategic elements of change processes. This failure to engage with longer term, often arguably 'softer' facets of change management processes 'limits the ability of SMEs to change efficiently and effectively, thus their resilience' (Ates and Bitici, 2011, p5614). However, these authors do not address the reasons for SME managers' short term focus.

The ability of an SME to access finance has been found to be important for resilience, although this can be problematic, with SMEs in general, and family-run SMEs in particular experiencing difficulties securing external finance (Institute for Family Business, 2018). Cowling et al (2014) note a tendency for SMEs of larger size and with good access to finance to be most resilient in the face of economic downturns. Similarly, McGuinness and Hogan (2014) argue that the financial position of an SME in the run-up to an economic downturn is more important than age or size of the company in determining the impact of the crisis. They

find that in times of economic downturn, financially vulnerable SMEs tend to turn increasingly to trade credit as a substitute for bank finance to keep their businesses going.

Taking a more disciplined strategic approach has been found to impact on an SME's ability to survive adversity. Pal et al (2014) empirically find that SMEs may be able to enhance their resilience by 'tuning their strategic assets and capabilities' (p421), notably by focusing upon access to finance, material assets, networking, and strategic & operational flexibility. They also argue for the influence of attentive leadership on an SME's likelihood to survive adversity. Demmer et al (2011) suggest that antecedents identified in resilience research with a large organisation focus are also appropriate to SMEs, however they also identify additional 'facilitators of resilience' (p5409) which they suggest are especially relevant to SMEs, and which have an innovation focus. They include a strong commitment to innovation driven by the business leader, a structure in which managers 'own' rather than simply manage processes, a robust strategic planning process, early and sustained involvement in customer innovation projects, and recruitment and training with innovation in mind.

Other research has considered globalisation and governance as routes to resilience. Hilmersson (2014) finds that internationalising its business can help an SME to be resilient in times of turbulence, and that expanding into a number of markets quickly allows SMEs to establish first-mover benefits, which increase the resilience conferred by internationalisation. Lampel et al (2014) assert that employee-owned small businesses, in which employees also have involvement in governance, show greater resilience than non-employee owned businesses. They particularly note an increased propensity for the top management in employee owned organisations to involve employees in strategic decision-making, combined with longer investment payback horizons in such organisations.

Resource and capability constraints, often linked to their size, are frequently characterised as obstacles to resilience in SMEs in this stream of work, nevertheless an emergent focus on structural and strategic features which smaller organisations may be able to exploit as a way of improving resilience offers a focus for ongoing inquiry.

6.2.2 SME leader resilience

Ayala and Manzano's (2014) empirical study tests the hypothesis that the resilience of an entrepreneur is correlated with the growth of their business, and finds a positive association. They find that resilience has predictive validity, and that entrepreneurs that score highly for

resilience characteristics are likely to run successful business that grows over time. This chimes with the work of Powell and Baker (2011) who argue that an SME's resilience is strongly correlated with its resourceful behaviours, which they define as actions that ensure the best use of limited resources, and which are shaped by the commitment of the leader to the business and its success. Whether a leader is driven by ideological commitments, or by commitments based on their identity with their organisation, can impact on the business behaviours that they drive. Both ideological and identity-based drivers offer routes to resilience. The first tends to produce more rigid 'staying the course' behaviours while the second fosters more flexible approaches, but both can contribute directly to organisational resilience. As well as linking leaders with the resilience of their businesses, this report contends that routes to resilience may be multiple and diverse.

Conz et al (2015) find that SME resilience is linked to the ability of the leader to select and implement a range of strategies, depending upon the environment and circumstances they encounter. While sticking to one strategy can minimise risk in stable times, in a turbulent environment, the ability to be flexible and to adapt the strategy offers the organisation the best chance of survival. Strategic diversity is thus advanced as the key to SME resilience. Smallbone et al's (2012) study into small firm performance in an economic downturn also finds that flexibility and adaptability in terms of strategies pursued is central to the resilience of these organisations. However, no real clarity related to the kinds of strategies that are likely to foster resilience emerges from this study - the authors note that there is no 'one size fits all' solution, and that sometimes strategies are only successful if used alongside other approaches and interventions. Bamiazi and Kirchmaier (2014) attribute resilience in small businesses to a tendency for their leaders to respond to challenging trading environments by embracing higher risk strategies like product innovation rather than the more prosaic retrenching approaches.

Baron and Markman (2000) point to the influence of the social capital and social skills of the leader in influencing the success of entrepreneurial businesses. Social capital is 'the actual and potential resources individuals obtain from knowing others, being part of a social network with them, or merely from being known to them and having a good reputation' (p107) and it is underpinned by social skills, including the ability to read others, and to impress and influence them. It is the combination of social capital and social skills in the leader that is crucial in influencing business success, because while social capital is likely to deliver contacts and

opportunities, social skills shape ongoing relationships which are key to business success.

Fisher et al (2016) find that entrepreneurs exhibit high levels of resilience compared to the general population, and that resilience is a predictor for entrepreneurial success at the individual level. However they find no significant relationship between individual resilience and business success. For Bernard and Barbosa (2016) resilience is a process that occurs in some individuals rather than a trait present in them. On their account, the resilience process unfolds over time, often provoked by a traumatic event early in life, and encouraged by interactions with others as the individuals strive to overcome the trauma. Eventually, the resilience process itself can become a trigger for the individual's entrepreneurial ambitions. In this way, resilience is presented as a precursor of entrepreneurship, indeed the authors talk of 'those resilience mechanisms that may potentially contribute to the transformation of a difficulty or a displacement into an entrepreneurial act' (Bernard and Barbosa, 2016, p93). This notion offers a fresh perspective on the relationship between an organisation's resilience and that of its leader, with the contention that resilient individuals are naturally inclined towards entrepreneurial endeavour. This resonates with the work of De Vries and Shields (2006) who identify flexibility, motivation, perseverance and optimism not as traits, but rather as behavioural patterns which result from life experiences. They assert that these behaviours are present in entrepreneurs, underpinning their personal resilience but also 'the propensity for resilience in [their] business activity' (p42). In this way, the link between the individual resilience of the entrepreneur and the resilience of their organisation is advanced.

In an exploration of the impact of unanticipated riots on small businesses in London, Doern (2016) contends that the mind-set of the owner is central to a resilient business. Distinguishing between *containment* and *anticipation* mind-sets, she notes that owner-managers tend towards the former, responding to crises rather than anticipating and planning for them, and argues that leaders who adopt an anticipation mind-set, thus increasing their response repertoires, and who undertake training to improving their adaptive thinking, will have a positive influence on the resilience of their companies. Doern (2016) also notes a tendency for prior experience of shocks in business owners to increase the likelihood of resilience SMEs. She also finds that previous experience of such events in local bodies who may provide assistance, such as local government personnel, can mean quicker and better targeted assistance for businesses in the wake of shocks. This implies that the location of a business may contribute to its ability to bounce back in the event of a shock.

Research in this stream often characterises resilience as a character trait or set of traits present in the individual manager, on which an organisation can draw in times of adversity. However, a significant limitation is that few studies in this strand offer clarity around the ways in which the individual's resilience works to increase the resilience of the organisation itself (Korber and McNaughton, 2017). Exploring and elucidating this link would address this limitation, and potentially offer valuable insights into the relationship between the leader and the organisation.

6.2.3 Interventions to improve resilience in SMEs

Literature that considers interventions that may increase SME resilience is scarce, and only a handful of studies, outlined below, has been identified which advance and empirically examine such initiatives. Studies to date offer a strong focus on coaching, business training and the development of support networks.

Gray and Jones (2015) find that the introduction of an organisational development and learning programme focusing on collaboration and coaching can impact positively on the resilience of individual entrepreneurs. They note that entrepreneurs often find themselves isolated and working alone, but that creating a supportive peer community with whom they can undertake business training can help such individuals to develop their confidence as well as a range of business skills. In addition, they argue that incorporating reflective learning into these programmes can help individuals to develop their abilities to identify problems and to develop inventive strategies to deal with them. Gunasekaran et al (2011) also argue for senior management training interventions to keep these individuals up to date with technological advances in particular, because SMEs tend to be cautious about adopting unfamiliar new technologies.

Bullough and Renko (2013) argue that an essential precondition for leader resilience is the individual's self-efficacy, or belief in their own abilities to manage the effects of adversity. Believing that they are capable of taking the right decisions in difficult circumstances makes it more likely that these individuals will demonstrate resilience by bouncing back from challenges. A combination of self-efficacy and resilience in entrepreneurs 'provides an individual with even more entrepreneurial power than the two factors alone' (p345). These authors advocate activities to build resilience and self-efficacy in entrepreneurs, such as business education, mentoring (especially with successful entrepreneurs), peer to peer

coaching and networking.

Blatt (2009) argues that the entrepreneurial context that many small and medium sized organisations share can make building resilience especially challenging. She points to the ambiguity that smaller organisations often face as they strive to establish themselves which, combined with less formal routines and roles than larger and more established organisations, can provoke a tendency for team members to 'regress to over-learned responses and role-based behaviour' (p2) in the face of challenges. Blatt's study indicates that fostering communal relational schemas – essentially investing time and resources in building cohesive teams – and adopting contracting practices to clarify roles and responsibilities can impact positively on resilience of these businesses.

Building networks also been a focus for a very small number of non-academic studies (e.g., RSA, 2015; Jones and Mean, 2010) where attention has often extended to include the development of resilient communities and the benefits that this can deliver to those living in the communities as well as to small business organisations. Other than this, although some academic work has also considered the link between place and entrepreneurship (e.g., Williams and Nadin, 2010; Williams and Huggins, 2013) the link between the location of an SME and its resilience has received very little attention.

The very limited number of empirical studies available demonstrates that researchers have only recently begun to contemplate practical interventions that may influence an SME's ability to survive adversity. The early insights generated by these studies suggest that this area of research could be key to developing practical guidance for resilience within the distinctive context of the SME. Moreover, the notion that such interventions may extend to the location of the SMEs, and to the local communities that SMEs engage with, may offer a further route to resilience worthy of examination.

6.3 SME resilience research to date: conclusions

As noted earlier, business resilience research to date has tended to adopt a large organisation focus, and has assumed that findings are likely to apply to the SME context (Ates and Bitici, 2011). Resilience research with an overtly SME focus is emergent. To date, such research has primarily focused upon the individual resilience of the leaders of SMEs, which has often been characterised as little more than a resource to underpin organisational

resilience, and on SME characteristics and capabilities, which have often been presented as detrimental to their ability to be resilient. A very limited body of work has considered practical interventions which may improve resilience in SMEs. As already noted, continued focus on the identification and exploration of such initiatives and on their impacts would appear to be an obvious area for future research.

In addition, exploring contextual aspects unique to SMEs that may work to their advantage in developing resilience, and interrogating the link between leader resilience and organisation resilience with a view to elucidating it, offer two further future research avenues. Notably absent also is research that explores SME resilience in the context of the organisation's geographical location.

REFERENCES

Alesi, P. (2008). Building enterprise-wide resilience by integrating business continuity capability into day-to-day business culture and technology. Journal of Business Continuity & Emergency Planning, 2(3), 214-220.

Amann, B., & Jaussaud, J. (2012). Family and Non-family Business Resilience in an Economic Downturn. Asia Pacific Business Review, 18(2), 203-223.

Annarelli, A., & Nonino, F. (2016). Strategic and operational management of organizational resilience: Current state of research and future directions. Omega, 62, 1-18.

Ates, A., & Bititci, U. (2011). Change process: a key enabler for building resilient SMEs. International Journal of Production Research, 49(18), 5601-5618.

Avery, G. C., & Bergsteiner, H. (2011). Sustainable leadership practices for enhancing business resilience and performance. Strategy & Leadership, 39(3), 5-15.

Avey, J. B., Luthans, F., & Jensen, S. M. (2009). Psychological capital: a positive resource for combating employee stress and turnover. Human resource management, 48(5), 677-693.

Ayala, J.-C., & Manzano, G. (2014). The resilience of the entrepreneur. Influence on the success of the business. A longitudinal analysis. Journal of Economic Psychology, 42, 126-135.

Bamiatzi, V., C., & Kirchmaier, T. (2012). Strategies for superior performance under adverse conditions: A focus on small and medium-sized high-growth firms. International Small Business Journal, 32(3), 259-284.

Baron, R. A., & Markman, G. D. (2000). Beyond social capital: How social skills can enhance entrepreneurs' success. Academy of Management Executive, 14(1), 106-116.

Battisti, M., & Deakins, D. (2017). The relationship between dynamic capabilities, the firm's resource base and performance in a post-disaster environment. International Small Business Journal, 35(1), 78-98.

Bernard, M.-J., & Barbosa, S. D. (2016). Resilience and entrepreneurship: A dynamic and biographical approach to the entrepreneurial act. M@n@gement, 19(2), 89-121.

Bhamra, R., Dani, S., & Burnard, K. (2011). Resilience: the concept, a literature review and future directions. International Journal of Production Research, 49(18), 5375-5393.

Blatt, R. (2009). Resilience in Entrepreneurial Teams: Developing the Capacity to Pull Through (Vol. 29).

Boin, A., & van Eeten, M. J. G. (2013). The Resilient Organization. Public Management Review, 15(3), 429-445.

Bradley, S. W., Shepherd, D. A., & Wiklund, J. (2011). The Importance of Slack for New Organizations Facing 'Tough' Environments. Journal of Management Studies, 48(5), 1071.

Britt, T. W., Shen, W., Sinclair, R. R., Grossman, M. R., & Klieger, D. M. (2016). How Much Do We Really Know About Employee Resilience? Industrial & Organizational Psychology, 9(2), 378.

Bullough, A., & Renko, M. (2013). Entrepreneurial resilience during challenging times. Business Horizons, 56, 343-350.

Campbell-Sills, L., & Stein Murray, B. (2007). Psychometric analysis and refinement of the connor–davidson resilience scale (CD-RISC): Validation of a 10-item measure of resilience. Journal of Traumatic Stress, 20(6), 1019-1028.

Christopher, M., & Peck, H. (2004). Building the Resilient Supply Chain. International Journal of Logistics Management, 15(2), 1-13.

Connor, K. M., & Davidson, J. R. T. (2003). Development of a new resilience scale: The Connor-Davidson Resilience Scale (CD-RISC). Depression & Anxiety (1091-4269), 18(2), 76.

Conz, E., Denicolai, S., & Zucchella, A. (2017). The resilience strategies of SMEs in mature clusters. Journal of Enterprising Communities, 11(1), 186-210.

Coutu, D. L. (2002). How Resilience Works. Harvard Business Review, 80(5), 46-55.

Craighead, C. W., Blackhurst, J., Rungtusanatham, M. J., & Handfield, R. B. (2007). The Severity of Supply Chain Disruptions: Design Characteristics and Mitigation Capabilities. Decision Sciences, 38(1), 131-156.

De Vries, H., & Shields, M. (2006). Towards a Theory of Entrepreneurial Resilience: A Case Study Analysis of New Zealand SME Owner Operators. New Zealand Journal of Applied Business Research (NZJABR), 5(1), 33-43.

Demmer, W. A., Vickery, S. K., & Calantone, R. (2011). Engendering resilience in small- and medium-sized enterprises (SMEs): a case study of Demmer Corporation. International Journal of Production Research, 49(18), 5395-5413.

Denyer, D. (2017). Organisational resilience: a summary of academic evidence, business insights and new thinking: BSI and Cranfield School of Management.

Doern, R., Williams, N., & Vorley, T. (2016). Entrepreneurship and Crises: Business as Usual? Entrepreneurship and Regional Development, 28(5-6), 471-475.

European Union. (2015). Statistics on small and medium sized business enterprises. Retrieved from http://ec.europa.eu/eurostat/statistics-explained/index.php/Statistics_on_small_and_medium-sized_enterprises.

Fisher, R., Maritz, A., & Lobo, A. (2016). DOES INDIVIDUAL RESILIENCE INFLUENCE ENTREPRENEURIAL SUCCESS? Academy of Entrepreneurship Journal, 22(2), 39-53.

Gimenez, R., Hernantes, J., Labaka, L., Hiltz, S. R., & Turoff, M. (2017). Improving the resilience of disaster management organizations through virtual communities of practice: A Delphi study. Journal of Contingencies & Crisis Management, 25(3), 160-170.

Gittell, J. H., Cameron, K., Lim, S., & Rivas, V. (2006). Relationships, Layoffs, and Organizational Resilience: Airline Industry Responses to September 11. The Journal of Applied Behavioral Science, 42(3), 300-329.

Gray, D., & Jones, K. F. (2016). Using organisational development and learning methods to develop resilience for sustainable futures with SMEs and micro businesses. Journal of Small Business & Enterprise Development, 23(2), 474.

Gunasekaran, A., Rai, B. K., & Griffin, M. (2011). Resilience and competitiveness of small and medium size enterprises: an empirical research. International Journal of Production Research, 49(18), 5489-5509.

Hamel, G., & Välikangas, L. (2003). The Quest for Resilience. (cover story). Harvard Business Review, 81(9), 52-63.

Herbane, B. (2010). Small business research: Time for a crisis-based view. International Small Business Journal, 28(1), 43-64.

Hilmersson, M. (2014). Small and medium-sized enterprise internationalisation strategy and performance in times of market turbulence. International Small Business Journal: Researching Entrepreneurship, 32(4), 386-400.

Institute for Family Business (UK). (2018). The State of the Nation - The UK Family Business Sector.

Jones, S., & Mean, M. (2010). Resilient places: Demos.

Jüttner, U., & Maklan, S. (2011). Supply chain resilience in the global financial crisis: an empirical study. Supply Chain Management: An International Journal, 16(4), 246-259.

Korber, S., & McNaughton, R., B. . (2017). Resilience and entrepreneurship: a systematic literature review. International Journal of Entrepreneurial Behavior & Research.

Koronis, E., & Ponis, S. (2018). Better than before: the resilient organization in crisis mode. Journal of Business Strategy, 39(1), 32-42. doi:10.1108/JBS-10-2016-0124.

Lampel, J., Bhalla, A., & Jha, P. P. (2014). Does governance confer organisational resilience? Evidence from UK employee owned businesses. European Management Journal, 32, 66-72.

Lauridsen, L. S., Willert, M. V., Eskildsen, A., & Christiansen, D. H. (2017). Cross-cultural

adaptation and validation of the Danish 10-item Connor-Davidson Resilience Scale among hospital staff. Scandinavian Journal of Public Health, 45(6), 654-657.

Lee Amy, V., Vargo, J., & Seville, E. (2013). Developing a Tool to Measure and Compare Organizations' Resilience. Natural Hazards Review, 14(1), 29-41.

Lengnick-Hall, C. A., Beck, T. E., & Lengnick-Hall, M. L. (2011). Developing a capacity for organizational resilience through strategic human resource management. Human Resource Management Review, 21(3), 243-255.

Linnenluecke, M. K. (2017). Resilience in Business and Management Research: A Review of Influential Publications and a Research Agenda. International Journal of Management Reviews, 19(1), 4-30. doi:10.1111/ijmr.12076.

Luthans, F. (2002). The Need for and Meaning of Positive Organizational Behavior. Journal of Organizational Behavior(6), 695.

Luthans, F., Avolio, B. J., Avey, J. B., & Norman, S. M. (2007). POSITIVE PSYCHOLOGICAL CAPITAL: MEASUREMENT AND RELATIONSHIP WITH PERFORMANCE AND SATISFACTION. Personnel Psychology, 60(3), 541-572.

Mallak, L. (1998). Putting organizational resilience to work. Industrial Management, 40(6), 8.

Mallak, L. A., & Yildiz, M. (2016). Developing a workplace resilience instrument. Work, 54(2), 241-253. doi:10.3233/WOR-162297.

Marc, C., Weixi, L., Andrew, L., & Ning, Z. (2014). What really happens to small and medium-sized enterprises in a global economic recession? UK evidence on sales and job dynamics. International Small Business Journal, 33(5), 488-513.

McGuinness, G., & Hogan, T. (2014). Bank credit and trade credit: Evidence from SMEs over the financial crisis. International Small Business Journal, 34(4), 412-445.

Meyer, A. D. (1982). Adapting to Environmental Jolts. Administrative Science Quarterly, 27(4), 515-537.

Newman, A., Mole Kevin, F., Ucbasaran, D., Subramanian, N., & Lockett, A. (2017). Can Your Network Make You Happy? Entrepreneurs' Business Network Utilization and Subjective Well-being. British Journal of Management, 0(0).

Ortiz-De-Mandojana, N., & Bansal, P. (2016). THE LONG-TERM BENEFITS OF ORGANIZATIONAL RESILIENCE THROUGH SUSTAINABLE BUSINESS PRACTICES. Strategic Management Journal, 37(8), 1615.

Pal, R., Torstensson, H., & Mattila, H. (2014). Antecedents of organizational resilience in economic crises—an empirical study of Swedish textile and clothing SMEs. International Journal of Production Economics, 147, 410-428.

Powell, E. E., & Baker, T. (2011). Beyond making do: Towards a theory of entrepreneurial resourcefulness. Frontiers of Entrepreneurship Research, 31(12).

Reymen, I. M. M. J., Andries, P., Berends, H., Mauer, R., Stephan, U., & Van Burg, J. C. (2015). Understanding dynamics of strategic decision-making in venture creation: a process study of effectuation and causation. Strategic Entrepreneurship Journal, 9, 351-379.

RSA. (2015). Community Capital: The Value of Connected Communities.

Seville, E., Brunsdon, D., Dantas, A., Le Masurier, J., Wilkinson, S., & Vargo, J. (2008). Organisational resilience: Researching the reality of New Zealand organisations. Journal of Business Continuity & Emergency Planning, 2(3), 258-266.

Sheffi, Y., & Rice Jr, J. B. (2005). A Supply Chain View of the Resilient Enterprise. MIT Sloan Management Review, 47(1), 41-48.

Smallbone, D., Deakins, D., Battisti, M., & Kitching, J. (2012). Small business responses to a major economic downturn: Empirical perspectives from New Zealand and the United Kingdom. International Small Business Journal, 30(7), 754-777.

Staw, B. M., Sandelands, L. E., & Dutton, J. E. (1981). Threat-Rigidity Effects in Organizational Behavior: A Multilevel Analysis. Administrative Science Quarterly, 26(4), 501-524.

Sullivan-Taylor, B., & Branicki, L. (2011). Creating resilient SMEs: why one size might not fit all. International Journal of Production Research, 49(18), 5565-5579.

Sutcliffe, K. M., & Vogus, T. J. (2003). Organizing for resilience. In K. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), Positive organizational scholarship (pp. 94-110). San Fransisco: Berret-Koehler.

Teixeira, E. d. O., & Werther, W. B. (2013). Resilience: Continuous renewal of competitive advantages. Business Horizons, 56(3), 333-342.

Van de Walle, S. (2014). Building Resilience in Public Organizations: The Role of Waste and Bricolage. Innovation Journal, 19(2), 2-18.

van der Vegt, G. S., Essens, P., Wahlström, M., & George, G. (2015, 08//). MANAGING RISK AND RESILIENCE, Editorial. Academy of Management Journal, pp. 971-980.

Weick, K. E. (1993). The Collapse of Sensemaking in Organizations: The Mann Gulch Disaster. Administrative Science Quarterly, 38(4), 628-652.

Weick, K. E., & Sutcliffe, K., M. . (2006). Mindfulness and the Quality of Organizational Attention. Organization Science(4), 514.

Williams, C. C., & Nadin, S. (2010). THE COMMONALITY AND CHARACTER OF OFF-THE-BOOKS ENTREPRENEURSHIP:: A COMPARISON OF DEPRIVED AND AFFLUENT

URBAN NEIGHBORHOODS. Journal of Developmental Entrepreneurship, 15(3), 345-358.

Williams, N., & Huggins, R. (2013). Supporting entrepreneurship in deprived communities: a vision too far? Journal of Small Business & Enterprise Development, 20(1), 165.

Williams, T. A., Gruber, D. A., Sutcliffe, K. M., Shepherd, D. A., & Zhao, E. Y. (2017). Organizational Response to Adversity: Fusing Crisis Management and Resilience Research Streams. Academy of Management Annals, 11(2), 733.

Windle, G., Bennett, K. M., & Noyes, J. (2011). A methodological review of resilience measurement scales. Health and Quality of Life Outcomes, 9(1), 8.

Youssef, C. M., & Luthans, F. (2007). Positive Organizational Behavior in the Workplace: The Impact of Hope, Optimism, and Resilience. Journal of Management, 33(5), 774-800.

APPENDIX 1: CONTENT OF THE CONNOR-DAVIDSON RESILIENCE SCALE

1. Able to adapt to change
2. Close and secure relationships
3. Sometimes fate or God can help
4. Can deal with whatever comes
5. Past success gives confidence for new challenge
6. See the humorous side of things
7. Coping with stress strengthens
8. Tend to bounce back after illness or hardship
9. Things happen for a reason
10. Best effort no matter what
11. You can achieve your goals
12. When things look hopeless, I don't give up
13. Know where to turn for help
14. Under pressure, focus and think clearly
15. Prefer to take the lead in problem solving
16. Not easily discouraged by failure
17. Think of self as strong person
18. Make unpopular or difficult decisions
19. Can handle unpleasant feelings
20. Have to act on a hunch
21. Strong sense of purpose
22. In control of your life
23. I like challenges
24. You work to attain your goals
25. Pride in your achievements

Source: Connor and Davidson (2003)

APPENDIX 2: CONTENT OF THE SHORTER CONNOR-DAVIDSON RESILIENCE SCALE

1. Able to adapt to change
4. Can deal with whatever comes
6. Tries to see humorous side of problems
7. Coping with stress can strengthen me
8. Tend to bounce back after illness or hardship
11. Can achieve goals despite obstacles
14. Can stay focused under pressure
16. Not easily discouraged by failure
17. Thinks of self as strong person
19. Can handle unpleasant feelings

Source: Campbell-Sills et al (2007)

Centre Manager
Enterprise Research Centre
Warwick Business School
Coventry, CV4 7AL
CentreManager@enterpriseresearch.ac.uk

Centre Manager
Enterprise Research Centre
Aston Business School
Birmingham, B4 7ET
CentreManager@enterpriseresearch.ac.uk

www.enterpriseresearch.ac.uk