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Perceiving 'capability' within dynamic capabilities: the role of owner-manager self-efficacy

Keywords

Dynamic capabilities, self-efficacy, micro-foundations, micro-enterprises, management cognition

Abstract

This article combines two popular, yet separate concepts, dynamic capabilities and self-efficacy. Both are concerned with ability / capability and offer potentially valuable synergies. As such, our in-depth qualitative study based in three micro-enterprises in the United Kingdom (UK), investigated, 'what role(s) may owner-manager perceived self-efficacy play as a micro-foundation of dynamic capabilities in micro-enterprises?' Our findings show that perceived self-efficacy can influence dynamic capability enactment in multifaceted ways and even suggest that in some cases, perceived self-efficacy is a crucial component of dynamic capabilities, without which there may be no such capability. These insights help open up the black box of dynamic capabilities by contributing important knowledge to the growing body of research into the micro-foundations of such capabilities. Furthermore, our study illuminates the importance of idiosyncratic micro-foundations of dynamic capabilities in micro-enterprises and expands extant knowledge of the potential effects of self-efficacy in the small business and entrepreneurship domain.

Introduction

Research into dynamic capabilities has burgeoned over the past 20 years, since the seminal article by Teece, Pisano and Shuen (1997). There is now a significant and relatively new movement within this literature analysing the micro-foundations of these capabilities (Vogel and Güttel, 2013). The micro-foundations movement seeks to understand the 'lower-level' factors that contribute to enterprise level dynamic capabilities, and includes, for example, the constituent components or 'parts' (Felin, Foss, Heimeriks and Madsen, 2012: 1352, 1355) of these capabilities. Understanding about such micro-foundations remains limited; in this article we contribute to this scholarly movement by considering 'what role(s) may owner-manager perceived self-efficacy play as a micro-foundation of dynamic capabilities in micro-enterprises?'

Our study also contributes to the growing focus on self-efficacy within small business and entrepreneurship research (McGee, Peterson, Mueller and Sequeira, 2009). Whilst both dynamic capabilities and self-efficacy are concerned with ability / capability, our literature analysis suggests little attention has been afforded to the role that self-efficacy may play in dynamic capabilities. This article therefore, offers the potential to broaden understanding of the effects of perceived self-efficacy in the small business and entrepreneurship domain and to develop understanding of the nature of dynamic capabilities, particularly within micro-enterprises, by expanding knowledge of their potential micro-foundations. Broadening understanding of the nature of dynamic capabilities, we argue, could provide a step towards unifying scholars behind a common conceptualisation of such capabilities.

We addressed our research question by undertaking in-depth qualitative research in three UK-based micro-enterprises. Dynamic capabilities research has rarely been undertaken in micro-enterprises (Kevill, 2014) but given the small size of these enterprises, and the central role and strong influence owner-managers have upon them (Dawson, Breen and Satyen, 2002; Kelliher and Reinl, 2009; Matlay, 1999), they offer a potentially valuable context in which to investigate whether owner-managerial self-efficacy may be a micro-foundation of dynamic capabilities.

Micro-enterprises also play a significant economic and societal role. In 2016, enterprises with fewer than 10 employees accounted for 95.6% of all UK private sector enterprises. These micro-enterprises employed over 8.5 million people and contributed over £717 billion of private sector turnover (Department for Business, Energy and Industrial Strategy, 2016: 1-16). Developing understanding of the micro-foundations of dynamic capabilities in micro-enterprises, and the insights this could generate for policy and practice, could help improve the economic and societal impact of such enterprises since dynamic capabilities are argued to be a potential source of performance improvement for enterprises (Helfat, Finkelstein, Mitchell, Peteraf, Singh, Teece and Winter, 2007).

The article begins by outlining how we conceptualize dynamic capabilities and discussing key debates within this literature. We then critically review extant research into self-efficacy in the small business and entrepreneurship domain, before describing the research approach undertaken for our study. Our findings demonstrate that perceived self-efficacy of micro-enterprise owner-managers can have multi-faceted, and sometimes crucial, effects on the enactment of dynamic capabilities. As such, perceived self-efficacy can be an important idiosyncratic micro-foundation of dynamic capabilities. We argue this insight provides valuable

contributions to knowledge by adding to extant understandings of micro-foundations of dynamic capabilities and strengthens the arguments of those who suggest that idiosyncratic elements of dynamic capabilities are important. Furthermore, we explain that our findings advance understanding of the potential effects of perceived self-efficacy in the small business and entrepreneurship domain. We conclude by considering our contributions to policy and practice.

Dynamic capabilities and their micro-foundations

A dynamic capability is 'the capacity of an organization to purposefully create, extend, or modify its resource base' (Helfat et al., 2007: 4). As such, it is the ability of an enterprise to develop itself. Nevertheless, this does not mean that all enterprises that develop or change have dynamic capabilities. A distinguishing feature of dynamic capabilities is that they have a repeatable element (Helfat et al., 2007). We interpret this to mean that a dynamic capability leads to a number of organizational developments, undertaken in a rather similar manner, over time. Nevertheless, there are debates regarding the degree to which dynamic capabilities are patterned. Since Winter (2003) suggests that pure forms of highly routine conceptualisations of dynamic capabilities may not be found in practice, we join scholars such as Teece (2012) and Pandza and Thorpe (2009) in conceptualising dynamic capabilities as containing both patterned elements (common practices) and non-routine elements. This makes the concept of dynamic capabilities more practically relevant and supports empirical research into such capabilities.

It is important to note that we distinguish between the enactment of a dynamic capability and the dynamic capability itself. A dynamic capability is enacted when the organizational development is actually undertaken, whereas the dynamic capability is the ability of the enterprise to undertake this development. In other words, a dynamic capability is 'a potential for action' (Helfat et al., 2007: 37) rather than the action itself (Dougherty, Barnard and Dunne (2004) cited in Easterby-Smith and Prieto (2008)). For example, for an enterprise that undertakes a number of acquisitions of other enterprises over a number of years the enacted dynamic capability could be observed in the performance of practices involved in undertaking and managing specific acquisitions. The dynamic capability is the combination of all the factors for example, individuals, skills, knowledge of common practices etc. that facilitate the enactment of these practices. These underpinning factors are some of the micro-foundations (Felin et al., 2012; Teece, 2012) of the dynamic capability; it is the combination of these factors that constitutes the dynamic capability itself.

Currently there are a variety of theoretical perspectives on dynamic capabilities (Barreto, 2010; Easterby-Smith, Lyles and Peteraf, 2009); this has been criticised for causing confusion (Arend and Bromiley, 2009) and potentially slowing progress for future research (Di Stefano, Peteraf and Verona, 2010; Easterby-Smith et al., 2009; Peteraf, Di Stefano and Verona, 2013). Dynamic capabilities were originally conceptualized as, and are still largely seen to be, an organizational level phenomenon (Eisenhardt and Martin, 2000; Helfat et al., 2007; Teece et al., 1997). Having been considered mainly at the aggregate level of the organization, it is perhaps unsurprising that Pavlou and El Sawy (2011: 240) suggest that 'dynamic capabilities have been described mostly as abstract concepts or an elusive "black box."'. We argue that opening the black box could develop understanding of key features of dynamic capabilities, and therefore, help to unify scholars behind a more common conceptualisation of such capabilities.

A key avenue towards opening this black box is to develop understanding of the micro-foundations of dynamic capabilities. There have been calls for greater understanding to be gained about these micro-foundations; to this end, there has been a gradual increase in related literatures (Felin et al., 2012; Salvato and Rerup, 2011; Vogel and Güttel, 2013; Winter, 2013). Felin et al. (2012: 1352) helpfully summarize the focus of the micro-foundations movement, which 'proffers that an explanation of...collective phenomena requires consideration of lower-level entities, such as individuals or processes in organizations, and their interactions'. As such, the micro-foundations literature to which we contribute seeks to move beyond understanding dynamic capabilities at the aggregate level.

Felin et al. (2012) argue that there is a lack of extant research into micro-foundations of capabilities. Therefore, further empirical research into these micro-foundations is required. By investigating dynamic capabilities at a lower and more detailed level, such research could expand our understanding of the nature of dynamic capabilities and subsequently, help develop a more unified and consensual conceptualisation of dynamic capabilities. Developing this unified conceptualisation will be a lengthy process; within this article, we seek to contribute to such progress when analysing the role of owner-managerial perceived self-efficacy as a micro-foundation of dynamic capabilities.

There is also a debate within dynamic capabilities literature regarding the degree to which the idiosyncratic elements of dynamic capabilities matter (Easterby-Smith et al., 2009; Peteraf et al., 2013). Eisenhardt and Martin (2000: 1110) claim that 'effective dynamic capabilities can differ in form and details as long as the important commonalities are present' between such capabilities in different enterprises. Contrary to this, we

draw on the extant micro-foundations literature to align with scholars such as Teece et al (1997), who argue that idiosyncrasies within dynamic capabilities are potentially important sources of performance advantages for enterprises.

The micro-foundations literature has suggested that micro-foundations could potentially include, amongst other things, organizational structures (Teece, 2009), technology (Winter, 2013), relationships between individuals (Hodgson, 2012), the enterprise's individuals (Salvato, 2009) and their 'underlying nature, choices, abilities, propensities, heterogeneity, purposes, expectations and motivations' (Felin and Foss, 2005: 441). We argue that this wide range of micro-foundations that could underpin any one dynamic capability suggests that dynamic capabilities can be largely idiosyncratic to the enterprise in which they are based. Peteraf et al (2013) argue that idiosyncratic elements of dynamic capabilities could generate high added value so, potentially, are a source of sustainable competitive advantage. Whilst Eisenhardt and Martin's (2000) perspective would negate the necessity of understanding idiosyncratic micro-foundations of dynamic capabilities, we argue that understanding these is valuable and could develop scholarly understanding of important features of dynamic capabilities that could provide performance advantages for enterprises. This justifies our study into self-efficacy as a potential micro-foundation of dynamic capabilities in micro-enterprises. The importance of idiosyncratic features of dynamic capabilities also favours using qualitative research approaches – as we do in this study – since these generate rich insights to unpick such idiosyncrasies.

Further justification for our focus on self-efficacy as a potential micro-foundation of dynamic capabilities is provided by extant research into the role of cognition – particularly management cognition – as a micro-foundation of dynamic capabilities (Laamanen and Wallin, 2009). Hoon (2013) notes that studies in this area suggest managerial perceptions can influence development of an organisation's resource base. A person's perceived self-efficacy forms part of their cognition and influences their behaviour (Bandura, 1978; Boyd and Vozikis, 1994). As such, prior insights into cognitive micro-foundations of dynamic capabilities suggest it would be valuable to consider whether, and if so, how, perceived self-efficacy may play a role in dynamic capabilities. However, research into whether self-efficacy may be a micro-foundation of dynamic capabilities is currently lacking. For example, whilst organisation studies literature has included important work on self-efficacy (see for example, Anderson, Krajewski, Goffin and Jackson, 2008; McNatt and Judge, 2008; Parker, Halgin and Borgatti, 2016) and on the role of managers and / or cognition in dynamic capabilities (see for

example, Augier and Teece, 2009; Gavetti, 2005; Martin, 2011) our extensive search identified a gap in the literature regarding linking the concepts of self-efficacy and dynamic capabilities. This gap arises from the relative infancy of literature that focuses on the role of individuals in dynamic capabilities (Helfat et al., 2007) and the wider micro-foundations of dynamic capabilities.

These reasons also contribute to this literature gap within the small business and entrepreneurship domain. Whilst, as will be demonstrated below, research into self-efficacy has gained some prominence in this field, this is much less the case in relation to dynamic capabilities; one exception being a study undertaken for the UK Enterprise Research Centre. This study, discussed in Koryak, Mole, Lockett, Hayton, Ucbasaran and Hodgkinson (2015) and Lockett, Hayton, Ucbasaran, Mole and Hodgkinson (2013), comprised a review of prior research and suggested that an entrepreneur's willingness to undertake change may be determined, in part, by perceived self-efficacy and can relate to dynamic capabilities. However, the broad focus meant that inevitably, the links between self-efficacy and dynamic capabilities were only briefly acknowledged.

Another exception is work by Sprafke, Externbrink and Wilkens (2012) exploring the micro-foundations of dynamic capabilities from a behavioural perspective. It suggests that psychological empowerment can play a role in higher level (collective) dynamic capabilities by enhancing the effect of individual level dynamic capabilities on collective dynamic capabilities through the behaviours engendered from those who perceive themselves to be empowered. The authors highlight that self-efficacy is one of the four facets of psychological empowerment. Accordingly, their finding that psychological empowerment can play a role in higher level (collective) dynamic capabilities inevitably suggests that self-efficacy – since it is part of psychological empowerment – may also play a role in collective dynamic capabilities (Sprafke et al., 2012). Nevertheless, the insights they provide into the role of self-efficacy are limited since the study actually focuses very little on perceived self-efficacy itself, instead leaving it hidden behind the broader concept of psychological empowerment.

Contrary to this, we argue that perceived self-efficacy should be studied in-depth and in its own right to gain a deeper understanding of its potential micro-foundational role in order to begin to open the black box of dynamic capabilities, particularly in micro-enterprises. Given the broad scope of potential micro-foundations underpinning any one dynamic capability, future research could potentially inquire into many different possible micro-foundations. However, to generate deep understanding and address limitations of broadness within the studies of Koryak et al (2015), Lockett et al (2013) and Sprafke et al (2012), we concentrate specifically on

understanding perceived self-efficacy as a potential micro-foundation of dynamic capabilities in micro-enterprises.

Perceived self-efficacy in the small business and entrepreneurship domain

The concept of perceived self-efficacy stems from social cognitive theory (Bandura, 2001; Stajkovic and Luthans, 1998); its basic premise being that a person's evaluation of their own ability will influence their intentions and behaviours. Entrepreneurship research has increasingly engaged with self-efficacy (McGee et al., 2009) given its critical role in enacting intentions and informing persistence. A specific category of self-efficacy - 'entrepreneurial self-efficacy', which McGee et al. (2009: 965) define as 'a construct that measures a person's belief in their ability to successfully launch an entrepreneurial venture' – has come to the fore. Whilst numerous definitions of entrepreneurial self-efficacy abound (Drnovšek, Wincent and Cardon, 2010), we adopt Wood and Bandura's (1989: 408) definition of self-efficacy: 'beliefs in one's capabilities to mobilize the motivation, cognitive resources, and courses of action needed to meet given situational demands'.

This definition acknowledges that perceived self-efficacy depends on the situation at hand. Indeed, there is a debate as to whether self-efficacy is largely generic or context specific. Some believe that general self-efficacy¹ can appropriately determine entrepreneurial intentions and behaviour (McGee et al., 2009). Rather, we reflect those such as Gist (1987) and McGee et al (2009) who suggest that perceived self-efficacy differs dependent on the task and context at hand echoing Wood and Bandura's (1989: 408) reference to 'situational demands'. Furthermore, we argue that since perceived self-efficacy is subjective in nature and is influenced by an individual's own heterogeneous life experiences (Bandura, 1977; Boyd and Vozikis, 1994; Stajkovic and Luthans, 1998), self-efficacy and its effects are likely to be idiosyncratic to each individual and their specific context. As such, investigating self-efficacy as a potential micro-foundation of dynamic capabilities in micro-enterprises will generate understanding of important idiosyncratic features of dynamic capabilities.

Extant studies into perceived self-efficacy in the entrepreneurship domain have largely focussed on either or both of two areas: first, factors that influence self-efficacy, such as counterfactual thinking (Arora, Haynie and Laurence, 2013), elements of strategic decision making processes (Forbes, 2005), business planning activities (McCann and Vroom, 2015), entrepreneurship education (Sánchez, 2013; Zhao, Seibert and Hills, 2005), pull entrepreneurship (Dalborg and Wincent, 2015), gender (Wilson, Kickul and Marlino, 2007), and national culture (Shneor, Camgöz and Karapinar, 2013). The second area focuses upon effects of self-efficacy; for example: the influence self-efficacy may have upon an individual's intention to become an

entrepreneur (Bacq, Ofstein, Kickul and Gundry, 2016; Lanero, Vázquez and Aza, 2015), entrepreneurial orientation (Poon, Ainuddin and Haji Junit, 2006), and entrepreneurial passion (Dalborg and Wincent, 2015).

Since perceived self-efficacy can influence individual actions (Bandura, 1978; Boyd and Vozikis, 1994), and dynamic capabilities facilitate change oriented actions (Helfat et al., 2007), it can be argued that individual self-efficacy potentially forms part of an enterprise's dynamic capabilities. However, beyond the tentative suggestions by Koryak et al. (2015) and Lockett et al. (2013), the potential influence of self-efficacy on dynamic capabilities in the small business and entrepreneurship domain has not been considered. This is perhaps unsurprising given that dynamic capabilities research has historically focussed mainly on larger enterprises (Koryak et al., 2015; McKelvie and Davidsson, 2009) with only a small body of literature focussing on dynamic capabilities in SMEs (Battisti and Deakins, 2015; Rice, Liao, Galvin and Martin, 2015; Woldesenbet, Ram and Jones, 2011) and micro-enterprises (Arend, 2014; Kevill, 2014; Vickers and Lyon, 2014). Micro-enterprise, however, offers a unique context (Devins, Gold, Johnson and Holden, 2005; Kelliher and Reinl, 2009) deserving of more attention (Jaouen and Lasch, 2015; Kelliher and Reinl, 2009). It is ideally suited to investigating whether owner-managerial self-efficacy may play a micro-foundational role in dynamic capabilities as owner-managers often have a strong influence in micro-enterprises (Kelliher and Reinl, 2009), and so, their perceived self-efficacy may well have a more pronounced effect.

Prior studies into self-efficacy are largely quantitative; this is somewhat limiting. Whilst not decrying the value of quantitative research for investigating self-efficacy in entrepreneurship, we agree with Higgins et al. (2015) and Leitch, Hill and Harrison (2010) that qualitative research can offer additional in-depth insights. This generates rich and complex insights into the dynamic and temporal nature of self-efficacy perceptions and the sources and effects of perceived self-efficacy (Usher, 2009; Zeldin and Pajares, 2000). We argue that perceived self-efficacy is complex and idiosyncratic since it stems from unique and complex life histories (Boyd and Vozikis, 1994; Stajkovic and Luthans, 1998) and personal contexts (McGee et al., 2009). The deep complex insights that can be generated from qualitative research will contribute to unpicking the nature, sources and effects of complex self-efficacy beliefs. Consequently, we adopt an interpretive approach.

Analytical overview

By seeking to explain the 'constituent components' (Felin et al., 2012: 1353) of dynamic capabilities, research into micro-foundations provides an avenue towards the important task of opening up the black box of dynamic capabilities. Within the body of micro-foundations literature to which we contribute, there are arguments that

idiosyncratic individuals (Felin and Foss, 2005; Hodgson, 2012) and their cognition (Narayanan, Colwell and Douglas, 2009; Schlemmer and Webb, 2008) can be integral micro-foundations of dynamic capabilities. This infers that perceived self-efficacy, as an idiosyncratic element of cognition that can influence individual intentions and behaviours (Boyd and Vozikis, 1994; McGee et al., 2009), could potentially underpin an enterprise's dynamic capabilities to develop its resource base. Nevertheless, a lack of research into whether this is the case represents a gap within extant literature. To contribute to opening the black box of dynamic capabilities further we seek to answer the following research question: 'what role(s) may owner-manager perceived self-efficacy play as a micro-foundation of dynamic capabilities in micro-enterprises?'

Methods

Participant enterprises and their dynamic capabilities

Research was undertaken in three UK-based micro-enterprises. Background information about each business can be found in table 1.

TABLE 1 HERE

Within each enterprise we looked to understand just one dynamic capability, so as to enable in-depth understanding about the key features – including idiosyncratic micro-foundations – of that capability. This helped contribute to opening the black box of dynamic capabilities. The dynamic capability we investigated in Merchandising Enterprise enabled the development of niche marketing for different merchandising products. IT Enterprise's dynamic capability enabled the development of services that were new to the enterprise and also the development of how existing services were offered to customers. Media Enterprise's dynamic capability enabled the development of services that were new to the enterprise.

Data collection

Data collection consisted of 18 interviews – totalling over 17 hours in length and more than 350 pages of interview transcripts – and five days of qualitative shadowing. Most interviews were undertaken with one owner-manager in each enterprise² (see table 2). The lack of extant research into both dynamic capabilities in micro-enterprises (Kevill, 2014) and self-efficacy as a micro-foundation of dynamic capabilities, favoured a relatively inductive research approach (Saunders, Lewis and Thornhill, 2016). As such, we utilized methods

that would enable flexibility and openness in the insights research participants could provide. These methods included life story interviewing (Lieblich, Tuval-Mashiach and Zilber, 1998), more traditional unstructured interviewing (Easterby-Smith, Thorpe and Jackson, 2008), and qualitative shadowing (McDonald, 2005). The research undertaken in each enterprise is shown in table 2.

TABLE 2 HERE

The earlier interviews, undertaken with the owner-manager in each enterprise, were largely unstructured and covered factors such as the background to the enterprise, operations of the enterprise, developments that had taken place, and industry dynamism. This helped identify organizational developments that may have been enabled by a dynamic capability.

Following this, we sought to immerse ourselves in the everyday operations of the enterprises to deepen our understanding of these operations and the day-to-day experiences of the owner-managers. This understanding would help us make more informed judgements when analysing the interview data collected during our study. As such, we undertook qualitative shadowing in Merchandising Enterprise and IT Enterprise. Qualitative shadowing involves following a research participant as they undertake their daily actions whilst seeking a commentary from them to elicit 'purpose and meaning as well as, rather than just, behaviour or actions' (McDonald, 2005: 467). In our study this individual was predominantly the owner-manager, although we did also undertake a limited amount of shadowing with other members in these enterprises. Insights were recorded in hand written notes, which were typed up (McDonald, 2005) and referred to when necessary to support our formal analysis of the interview data collected.

Next, we sought further understanding about the dynamic capability in each enterprise. To achieve this we undertook life-story interviews (Lieblich et al., 1998). Life-story interviewing constitutes one form of narrative interviewing. We adopt Elliott's (2005) view³ that narratives are chronological, convey meaning, and are social. The chronological nature of narratives (Bruner, 1991; Gabriel, 2004; Riessman, 2008) makes them ideal for understanding dynamic capabilities, since organisational developments that are enabled by a dynamic capability take place over time. Whilst life-story interviews generally focus on the narrative of a person's life (Atkinson, 2002; Jones, Sambrook, Henley and Norbury, 2011; Kevill, Trehan, Easterby-Smith and Higgins, 2015), we sought, where possible, the life story of the enactment of the dynamic capability i.e. the sequential narrative of the organisational developments enabled by the dynamic capability. The narratives of these organisational developments provided a conduit through which we could delve within the black box of

dynamic capabilities and understand their key idiosyncratic micro-foundations. We undertook face-to-face life story interviews with each of the three owner-managers we had previously interviewed. In Merchandising Enterprise and IT Enterprise we also undertook life story interviews with other individuals in the enterprises.

A further interview was then undertaken with the owner-manager of Merchandising Enterprise to collect additional information. Then, following analysis of the owner-manager interviews undertaken up to this point, two further interviews were conducted to check the current findings with the owner-managers of Merchandising Enterprise and Media Enterprise and to gather further information.

Data analysis

The eleven interviews undertaken with the owner-managers are the main source of our findings. For the analysis of the first nine owner-manager interviews we utilized an amended version of Lieblich et al. (1998) holistic content narrative analysis approach which could be used for both our narrative and non-narrative data. We made some amendments to the analysis approach suggested by Lieblich et al (1998) which helped ensure the validity / credibility of our research findings. Two key additions to the analysis procedure were influenced by an approach used by Marshall (1995). First, we added a stage where we could check preliminary findings with the owner-managers⁴. This enabled us to more clearly understand the perceptions of these participants to develop the 'correspondence between the researcher's findings and the understandings of the participants being studied' (Tracy, 2010: 844). Second, the lead author kept a reflexive journal whilst undertaking the analysis. This journal provided an audit trail that recorded the rigorous application of our analysis procedure and the deep level of scrutiny to which we subjected our data supporting the credibility / validity of our findings. Furthermore, this reflexive journal enabled earlier sensemaking to be recalled at later stages during the analysis and also provided a platform to scrutinise and question the assumptions and values we brought to the analysis process. This enabled us to critique our interpretation of the interview data (Alvesson and Sköldbberg, 2009) in order to more authentically and credibly represent the perceptions of the research participants (Cho and Trent, 2006; Easterby-Smith, Thorpe and Jackson, 2015).

The analysis process used for the first nine owner-manager interviews began with reading through the interview transcript until themes began to emerge (Lieblich et al., 1998) reflecting the inductive nature of our study (Saunders et al., 2016). These themes were then captured in a global impression (Lieblich et al., 1998)

in the form of written commentary supplemented by quotes from the interview transcript. During the production of this document, regular reference back to the interview transcript was made to ensure our interpretation of the interviewee's perceptions and experiences was appropriate in order to achieve credibility / validity within our research findings (Tracy, 2010). References to practices involved in organizational developments of interest were then highlighted in the transcripts, scrutinised and written up to capture common practices involved in each enterprise's developments. This helped assess repeatability of the dynamic capabilities; repeatability being a key feature of dynamic capability (Helfat et al., 2007, Winter, 2003).

Next, we reviewed all the global impressions from the nine owner-manager interviews to draw out insights to analyse further (Lieblich et al., 1998). Within a number of the global impressions, the owner-manager reflections on their own abilities, their self-efficacy, shone through. This was particularly the case in IT Enterprise and Media Enterprise. For example, IT Enterprise's owner-manager emphasised a clear demarcation between his own technical and business skills and those of the enterprise's technical director. In Media Enterprise the owner-manager communicated a positive perception of his skills and experience. It became clear that in both enterprises owner-manager perceptions of self-efficacy were intertwined with the development of new service offerings. This mapped back to our research question by suggesting a micro-foundational role of self-efficacy in the dynamic capabilities in these enterprises. We duly decided to analyse more deeply the insights into self-efficacy as a micro-foundation of dynamic capabilities in order to open the black box of dynamic capabilities.

It became clear that insights relating to self-efficacy as a micro-foundation of dynamic capability were stronger in IT Enterprise and Media Enterprise than they were in Merchandising Enterprise. Nevertheless, there was still some indication that self-efficacy may be a micro-foundation of Merchandising Enterprise's dynamic capability. Whilst this offered the potential to provide further insights into our research question, we determined that additional input from the owner-manager of Merchandising Enterprise was required to ensure the credibility / validity of our findings. This was possible since in Merchandising Enterprise and Media Enterprise we were able to check the findings to date with, and gather further information from, the owner-manager during a further interview with them. These additional interviews were transcribed and insights regarding self-efficacy as a micro-foundation of dynamic capabilities were scrutinised in detail. The relevant written conclusion documents were subsequently amended accordingly. The additional information gained

from the owner-manager of Merchandising Enterprise strengthened our conviction that his self-efficacy was a micro-foundation of the enterprise's dynamic capability.

The interviews with the other members of IT Enterprise and Merchandising Enterprise were intended mainly to elicit further contextual information and additional perspectives to support or contradict those of the owner-managers. We next highlighted relevant insights in the transcripts of these interviews, scrutinised the highlighted text, and drew insights from them into the relevant written conclusion documents.

Findings

The findings from our study suggest that owner-managerial perceived self-efficacy can act as a micro-foundation of dynamic capabilities and can influence the enactment of such capabilities in multifaceted ways. They show that self-efficacy can influence the roles undertaken by different parties when a dynamic capability is enacted (Merchandising Enterprise and IT Enterprise), can influence the manner in which practices are enacted (Merchandising Enterprise), and can motivate and enable both the developments underpinned by a dynamic capability and a specific practice involved in these developments (Media Enterprise). Evidence from the research undertaken in the three enterprises will now be provided to support these claims. Following the advice of Tracy (2010), we have endeavoured to provide in-depth (or 'thick') description to demonstrate the trustworthiness (credibility) of our research findings.

Merchandising enterprise

The enactment of Merchandising Enterprise's dynamic capability to develop niche marketing for different products incorporated the performance of up to eight common practices (see table 3). We identified these common practices by understanding how the development of niche marketing had taken place for four separate products (clear acrylic key rings; loop fobs; customised pencils; mouse mats).

TABLE 3 HERE

The owner-manager was the key person driving the four developments. He was involved in all of the common practices, and therefore, formed an important micro-foundation of the dynamic capability. His partner and

employees were only involved in the 'training internal others' practice. Their involvement in this practice was quite reactive in that they were simply trained by the owner-manager. A large reason for this contrast in roles is that the owner-manager perceived himself to be the most equipped to drive the development of niche marketing. This is since others within the enterprise had very little knowledge or understanding of niche marketing: -

'They were concepts that the staff we have at the moment had very little knowledge or experience of so they were more trying to take it in and understand it rather than influence and direct it' (**Owner-Manager**)

Here the owner-manager's perception of his own ability, which was set against his perception of a lack of ability in others, influenced the roles he and others in the enterprise took when developing niche marketing. This suggests that the owner-manager's perceived self-efficacy formed an important part of the enterprise's overall ability (dynamic capability) to undertake these developments. This would also likely suggest that without the owner-manager perceiving himself as being capable in this area it would be unlikely that such developments would have been undertaken.

The owner-manager's perceived self-efficacy also influenced the manner in which certain practices in table 3 were enacted. One example being the degree of freedom the owner-manager gave to website developers to design the niche websites (part of the 'liaising with website developer about website design' practice) depended on the degree to which he perceived himself as being knowledge dependent in this area. As such, during different developments of niche marketing the manner in which this practice was enacted changed in line with the owner-manager's perception of his own self-efficacy in this domain. Therefore, the owner-manager's perceived self-efficacy influenced the enactment of the niche marketing developments here. This dynamic is illustrated by the following interview extract: -

'I think with the original (clear acrylic keyring) concept it was the first niche website so we gave them carte blanche. We didn't know what we wanted. Now we know from experience, or we think we know, what we want. Of course technology changes daily and what can be done in the website so we'll try and keep abreast of that, but we do try and direct now more what we think should be done than what the web designer will try and think makes a wonderful website' (**Owner-Manager**)

IT enterprise

Up to five common practices are involved in IT Enterprise developing new service offerings (see table 4).

TABLE 4 HERE

After IT Enterprise moved into offering larger scale services, the owner-manager decided to take on an employee with a higher technical skill set than his own. Whilst this individual was employed with the intention that he could free the owner-manager to focus more on the business side of IT enterprise, it was only after employing him that the owner-manager subsequently learned the full extent of this individual's technical skills and what he was bringing to the company.

'When [Technical Director] came I was still building the systems. I'd be building them with [Technical Director], and then as soon as I saw his capabilities I stopped' **(Owner-Manager)**

'I think it was after that time where I started to really recognise what [Technical Director] was doing for the company and I wanted to make him feel more part of it, so I then made him technical director. His remit there was to continue to try and allow me to look back at the work we were doing but as a company and him take the technical lead on, so that he would look at work for the clients, I would look at where the company was' **(Owner-Manager)**

This differentiation of roles is also reflected in the roles undertaken by both these individuals when enacting the enterprise's dynamic capability to develop new service offerings. The technical director leads on the technical side of service developments (the 'tracking technology and generating ideas' and 'implementing' practices in table 4) and the owner-manager's role focuses on the business and customer considerations relating to service developments ('recognising, and responding to, customer needs', 'making investment', and driving the 'considering application of technology and considering finances' practice). The following interview extracts provide some insight into this: -

'I'm the one who will sort of like make the decisions or let it flow but [Technical Director] is the one who's coming up with the exciting ideas. That's why we're into the [Managed Service Provider], that's why we're into the cloud, that's why we're doing DRs, you know, disaster recovery situation, you know, and that's why we've gone down these paths because he's got this vibrancy to investigate the fields' **(Owner-Manager)**

'The demarcation really is it becomes new technology, we need to implement things, [Technical Director] does it. I just give it all to [Technical Director]. I don't get involved with that. I don't touch it'

(Owner-Manager)

This division of roles aligns with the owner-manager's perceptions of the level of the technical skills of the technical director, and how these skills outshine his own skills. Nevertheless, the roles also appear to align with the owner-manager's perception that he is more able than the technical director when it comes to the business and customer sides of IT Enterprise.

'What I've got to do (is) I've got to reign him in now and again (and) say 'look, OK, but is this the right time and the right place to go?'' **(Owner-Manager)**

As such, it appears that the owner-manager's perceptions of his self-efficacy, when compared with his perception of the technical director's efficacy, influences the roles undertaken by each of these individuals in the enactment of the enterprise's dynamic capability to develop new service offerings. Therefore, the owner-manager's perceived self-efficacy seems to play an important role in the enterprise's dynamic capability to develop new service offerings.

Media enterprise

Media Enterprise have developed four new services since the enterprise's inception. These developments have comprised up to four common practices (see table 5).

TABLE 5 HERE

The owner-manager's past learning led him to have a positive perception of his own skills, knowledge and experience and this perceived self-efficacy transcended into the enterprise's dynamic capability. Indeed, without this positive self-efficacy it seems that the four new service developments would not have been undertaken at all, and therefore, the owner-manager's perceived self-efficacy constituted a core component of the dynamic capability that enabled these service developments.

'There's so many, you know, services we've got but I think I've got the skill and I've got the knowledge and the experience in all those different areas to be able to do that and offer it. I don't think I would have done otherwise, you know, it's a lot' **(Owner-Manager)**

The core role of the owner-manager's perceived self-efficacy within the dynamic capability is emphasised since the service developments involved existing skills within the enterprise being used to offer the new services (see table 5) and it was not unusual that the existing skills that were utilised were those of the owner-manager. This is illustrated, for example, in the case of the development of filmmaking services: -

'My ability in post-production made it very easy to then, you know, so as long as I get the camera operating side of it done, the filming side of it, then the editing's fine. So again it me having a large hand in that, my skill, my own skills, it made it easier' **(Owner-Manager)**

Despite the owner-manager's general positive perception of his self-efficacy though, for the development of website development services the owner-manager perceived that his (and his partner's) skills were not strong enough in this area. This led him to take on a freelancer who possessed the required skills.

'Web one was a little bit more difficult cause that is something that we would have to get other people to come in and help us on, you know, because I mean between us we know bits and pieces, we can probably mock up a page or do something basic, but something comprehensive is what we were looking for now like e-commerce sites and perhaps, you know, really comprehensive database driven sites, and that's when we would need external support and that's how we've kind of looked to develop that' **(Owner-Manager)**

As such, in this instance the owner-manager's perception of his self-efficacy played a key role in influencing the enactment of a specific common practice (the 'building a team' practice in table 5) during the development of this new service.

Discussion

These findings suggest that the perceived self-efficacy of owner managers can influence the enactment of dynamic capabilities in complex and multi-faceted ways. These influences are summarised in Table 6; they develop our understanding of the important micro-foundational role that owner-managerial perceived self-efficacy can play in dynamic capabilities in micro-enterprises.

TABLE 6 HERE

To some degree, the influence of self-efficacy in the more general area of strategic management has received attention. Hiller and Hambrick (2005), for example, argue that a CEO's core self-evaluation, which includes self-efficacy, is likely to influence their strategic decision making. Simsek, Heavey and Veiga (2010) undertake research that suggests CEO core self-evaluation relates positively with the entrepreneurial orientation of an organization, a finding that has some parallels with the work of Poon et al. (2006) which suggested a positive relationship between self-efficacy and entrepreneurial orientation. The insights from our research expand upon this work by extending consideration of the influence of self-efficacy to dynamic capabilities in entrepreneurship.

Providing insights about perceived self-efficacy as a micro-foundation of dynamic capabilities builds on extant micro-foundations literature to contribute towards opening the black box of dynamic capabilities. In particular, the insights from our study build on literature that has engaged with the role that managerial cognition may play as a micro-foundation of dynamic capabilities (Adner and Helfat, 2003; Laanmanen and Wallin, 2009). Extant literature in this area has suggested that, for example, managerial perceptions of environmental dynamism (Ambrosini, Bowman and Collier, 2009; Barrales-Molina, Benitez-Amado and Perez-Arostegui, 2010; Shang, Huang and Guo, 2010) and managerial perceptions of the value of a dynamic capability (Schlemmer and Webb, 2008), can act as important micro-foundations of dynamic capabilities. What tends to dominate in such literature is a preference towards manager perceptions of external factors. The insights from our study provide a different angle by showing how inward perceptions have an important role considered crucial in dynamic capabilities. These insights broaden scholarly understanding of the nature of dynamic capabilities, particularly within micro-enterprises, which generates new information to support a consensual conceptualisation of dynamic capabilities.

In this study, without owner-manager perceptions of self-efficacy, the enterprises may not have demonstrated dynamic capability. For example, the perceived self-efficacy of the owner-manager of Merchandising Enterprise enabled him to deploy himself, and other individuals, to appropriate roles that he felt they were capable of fulfilling. If he, and the others, were deployed to alternative roles they may not have been capable of fulfilling, the development of niche marketing is unlikely to have happened. As such, this would ultimately mean the enterprise would have had no dynamic capability to develop niche marketing. A similar argument could also be applied to IT Enterprise. In Media Enterprise, since the owner-manager's perceived self-efficacy

motivated the development of new service offerings, it could also be suggested that without recognition of his own ability, there would be no dynamic capability. In some cases, therefore, capability beliefs must reside and live within the mind(s) of individual key actor(s) in order for there to be a dynamic capability in micro-enterprises. As we argue, perceived self-efficacy is context dependent and idiosyncratic to each individual; this adds weight to arguments that idiosyncratic elements of dynamic capabilities can be crucial to realising performance advantages, thus countering Eisenhardt and Martin's (2000) treatment of the idiosyncratic elements of dynamic capabilities as insignificant.

Conclusion

We have provided in-depth empirical insights into the previously under-considered role that owner-manager perceived self-efficacy may have as a micro-foundation of dynamic capabilities. Our research in three UK-based micro-enterprises elucidated multi-faceted ways in which owner-managerial perceived self-efficacy can act as a micro-foundation of such capabilities. This adds to extant understanding of the impact self-efficacy has upon the small business and entrepreneurship domain and simultaneously, extends scholarly conversations regarding the micro-foundations of dynamic capabilities. Moreover, we suggest that, in at least some instances, idiosyncratic perceived self-efficacy is a crucial component without which there would be no dynamic capability. This illuminates a key potential micro-foundation of dynamic capabilities and contributes to debates regarding the importance of idiosyncratic elements of dynamic capabilities (Easterby-Smith et al., 2009; Peteraf et al., 2013).

By broadening understanding of the nature of dynamic capabilities, we offer a small step towards unifying scholars behind a more informed common conceptualisation of dynamic capabilities; a concept that has hitherto been subject to a variety of different perspectives (Barreto, 2010; Easterby-Smith et al., 2009). Any move towards a common conceptualisation would be important for developing future research into dynamic capabilities (Easterby-Smith et al., 2009; Peteraf et al., 2013; Vogel and Güttel, 2013). In turn, such research could generate important insights for enterprises, including small and micro-enterprises, as dynamic capabilities can influence enterprise performance (Helfat et al., 2007; Teece et al., 1997).

The insights in this article could also inform policy for owner-managers of micro-enterprises to enable greater understanding and reflection upon perceived self-efficacy in order to enable dynamic capabilities. Such

reflections may be facilitated through mentoring. Indeed, recent governmental policy has focussed on increasing the supply of high quality mentors to small enterprises. As part of this, funding has been provided to 'train business people from the micro, small and medium-sized business community to become volunteer business mentors' (Department for Business Innovation & Skills, 2012: 5). The insights from our research could feed into an initiative such as this by tailoring such training of mentors to equip them to help their mentees (owner-managers) to reflect on their own efficacy and how this may impact upon dynamic capabilities. In addition to such policy implications, this study could have more direct implications for practice. By understanding that their perceptions of self-efficacy can act as a micro-foundation of dynamic capabilities, owner-managers may be able to initiate unsupported self-reflection, in order to generate actions to enable dynamic capabilities in their enterprises.

Limitations and future research

Whilst only focusing on one dynamic capability in each enterprise enabled us to generate in-depth understanding, this could also be a limitation since it affected our ability to understand how different dynamic capabilities in the same micro-enterprise may be affected in similar or different ways by the same owner-manager's perceived self-efficacy. We would encourage future qualitative research into this, which could help to build on the insights from our study. We only focussed on the self-efficacy of one owner-manager within each enterprise. We would be interested in future research that investigates the potential influence of the self-efficacy of non-owner-managers (for example, employees) on dynamic capability enactment in micro-enterprises. This could further develop understanding of the effects of perceived self-efficacy in the small business and entrepreneurship domain and also develop understanding of key features of dynamic capabilities in micro-enterprises. Finally, since 'perceived self-efficacy is central to most human functioning' (Markman, Balkin and Baron, 2002: 152) it may also influence dynamic capability enactment in larger organisations, so we encourage future research into the potential micro-foundational role of self-efficacy in dynamic capabilities in larger enterprises.

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¹ General self-efficacy refers to ‘an individual’s perception of their ability to successfully perform a variety of tasks across a variety of situations’ (McGee et al., 2009: 969).

² Although there are two owner-managers in Merchandising Enterprise and Media Enterprise, in both of these enterprises one of the owner-managers drives the strategic development of the business. It is this owner-manager who participated in most – or all in the case of Media Enterprise – of the interviews within these enterprises. For clarity of communication this owner-manager will be referred to throughout the remainder of this paper as the ‘owner-manager’ of the enterprise. The other owner-manager in each enterprise will be referred to as their ‘partner’.

³ Elliott’s (2005) view builds upon a definition by Hinchman and Hinchman (1997) (cited in Elliott (2005))

⁴ The owner-manager of IT Enterprise was unavailable to participate in this stage though.

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Table 1

Enterprise	Service / Product Offering	Age*	Number of Owner-Managers*	Number of Employees*	Number of Freelancers
Merchandising Enterprise	Range of promotional products (e.g. keyrings, torches, mugs) that are mainly used by other enterprises for merchandising purposes. These products can be customised (e.g. with company logos).	15 years	2	2	0
IT Enterprise	IT services mainly to other enterprises. Services offered include cloud services, disaster recovery services and managed services.	14 years	1	4	0
Media Enterprise	Creative design services, website development services, and a number of different photography and filmmaking services.	4 years	2	1	Variable

**At the time data collection ended within the enterprise.*

Table 2

Enterprise	Research Participant	Number of Interviews	Total Duration of Interviews*	Qualitative Shadowing
Merchandising Enterprise**	Owner-Manager	5	4 hours 30 minutes	3 days
	Partner	1	25 minutes	
	Sales Processing Assistant	1	50 minutes	
	Marketing and Sales Processing Assistant	1	1 hour 10 minutes	
IT Enterprise	Owner-Manager	3	4 hours 35 minutes	2 days
	Technical Director	1	1 hour 20 minutes	
	Engineer 1	1	25 minutes	
	Engineer 2	1	30 minutes	
	Administrator	1	45 minutes	
Media Enterprise	Owner-Manager	3	2 hours 55 minutes	

**Rounded to the nearest 5 minutes*

***The research undertaken in Merchandising Enterprise was also supplemented at times by additional information gained through email exchanges and short telephone calls with the owner-manager.*

Table 3

Common Practices
Selecting Product
Choosing URL Name
Selecting Website Developer
Liaising with Website Developer about the Website Design
Making Provisions for SEO Management
Negotiating with Product Supplier
Training Internal Others
Emailing Existing Customers During Website Launch

Table 4

Common Practices
Tracking Technology and Generating Ideas
Recognising, and Responding to, Customer Needs
Considering Application of Technology and Considering Finances
Making Investment
Implementing

Table 5

Common Practices
Identifying Opportunities through Customers
Utilising Existing Equipment for New Services
Utilising Existing Skills for New Services
Building a Team

Table 6

<u>Enterprise</u>	<u>Effect of Perceived Self-Efficacy on Dynamic Capability Enactment</u>
Merchandising Enterprise	<ul style="list-style-type: none">• Influencing roles undertaken by different parties• Influencing manner in which practices were enacted
IT Enterprise	<ul style="list-style-type: none">• Influencing roles undertaken by different parties
Media Enterprise	<ul style="list-style-type: none">• Motivating and enabling service developments• Motivating and enabling enactment of specific practice

Word Count (Excluding Funding, End Notes, Reference List, Tables and Abstract) = 7,470 words