



Entrepreneurial competencies: a literature review and development agenda

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Abstract

Purpose – Entrepreneurial competencies are seen as important to business growth and success. The purpose of this paper is therefore to undertake a literature review of research on entrepreneurial competence in order to: provide an integrated account of contributions relating to entrepreneurial competencies by different authors working in different countries and different industry sectors and at different points in time; and, develop an agenda for future research, and practice in relation to entrepreneurial competencies.

Design/methodology/approach – The article starts with a review of the development of the concept of competence, with particular reference to its use in the context of management competencies. It then draws together views on the notion of entrepreneurial competence before exploring and summarising research on the link between entrepreneurial competencies and business performance and growth. A core section then compares the models of entrepreneurial competencies cited in the literature, and on this basis proposes a set of entrepreneurial competencies which can be used as the basis for further research and practice. Finally, the different perspectives adopted by researchers to the measurement of entrepreneurial competencies are reviewed.

Findings – Conclusions suggest that although the concept of entrepreneurial competencies is used widely by government agencies and others in their drive for economic development and business success, the core concept of entrepreneurial competencies, its measurement and its relationship to entrepreneurial performance and business success is in need of further rigorous research and development in practice.

Originality/value – This article integrates previous models of entrepreneurial competencies towards the development of an entrepreneurial competency framework.

Keywords Entrepreneurialism, Competences, Management personnel

Paper type Literature review

Introduction

Competence is a concept that has many faces and applications, and models of entrepreneurial competence are grounded in these various approaches to and notions of the concept of competence. Research and practice related to competence is typically driven by aspirations to achieve superior performance, and the potential for, in turn, economic gain or business success (Spencer and Spencer, 1993). On the other hand, one of the key challenges in the competence literature is that there are many definitions of competence (Van Overveld and Van Goudoever, 1997; Bron, 1999; Hayton and McEvoy, 2006; Hoffmann, 1999). Further, the terms “skills”, “expertise”, “acumen” and “competency” are all interrelated and are sometimes used interchangeably in the literature (Smith and Morse, 2005). Indeed, Hunt (1998) suggests that competent



behaviour results from a variety of factors including an individual's motivation, personality traits, self-concept, knowledge or skill and it is perhaps therefore not surprising that the boundaries and relationships between these terms are ill-defined. The ambiguity is further fuelled by the use of the concept competency by a range of stakeholders with differing objectives (Burgoyne, 1993). Therefore, this article undertakes a literature review of research on entrepreneurial competence in order to: provide an integrated account of contributions relating to entrepreneurial competencies by different authors working in different countries and different industry sectors and at different points in time; and, develop an agenda for future research, and practice in relation to entrepreneurial competencies.

There are at least two key meanings or uses of the term competency: competency as behaviours that an individual demonstrates; and, competencies as minimum standards of performance (Strebler *et al.*, 1997). Competency, preferred by the American school and promoted by Boyatzis is seen as an underlying characteristic of a person which results in effective action and/or superior performance in a job. Competence, on the other hand, has been preferred in the UK and developments have been supported by government, since 1988, through the Management Charter Initiative. Competence is seen as a description of something which a person who works in a given occupational area should be able to achieve, it is a description of an action, behaviour or outcome which a person should be able to demonstrate. (Cheng and Dainty, 2003). An understanding of the discussion on the nature of the concept of competence and its use in general is an important precursor to a discussion of entrepreneurial competencies.

Entrepreneurial competencies have been identified as a specific group of competencies relevant to the exercise of successful entrepreneurship. Such entrepreneurship is often associated with the development of small and new businesses (e.g. Colombo and Grilli, 2005; Nuthall, 2006), although there is increasing interest in corporate entrepreneurship and intrapreneurship (e.g. Hayton and Kelley, 2006; Sathe, 2003; Zahra *et al.*, 1999). In a study into the learning behaviour of small firms, Chaston *et al.* (1999) looked at how differing modes of behaviour relate to, and, impact on organisational capability and found that in spite of the extensive literature which exists relating to organisational learning, there were few attempts to operationalise the construct through the application of quantitative techniques, especially in the small firm sector. "Research to determine whether identifiable relationships exist between the performance of the firm, the learning mode of the organisation and organisational competence does not provide clear statistically significant relationships and further work is clearly needed" (Chaston *et al.*, 1999). Scholars researching in the field of entrepreneurship distinguish between managerial competencies and entrepreneurial competencies (Lerner and Almor, 2002; Chandler and Hanks, 1994a, b, c). Some suggest that entrepreneurial competencies are needed to start a business, while managerial skills are needed to grow the business, although competence in entrepreneurship requires competencies in both areas (Man *et al.*, 2002).

Interest in entrepreneurial competence derives from the supposed link between competencies and the birth, survival and growth of a venture (Bird, 1995; Baum, 1994). There is evidence to suggest that understanding of the competencies required and the changing role of the entrepreneur through the different phases of development of a business will support the development of competence, and, will, in turn, have consequences for successful business growth (Churchill and Lewis, 1983).

In summary, then, entrepreneurial competencies are seen as important to business growth and success, and, an understanding of the nature and role of such competencies can have important consequences for practice. Yet, despite the supposed importance of entrepreneurial competencies, the discussion of competencies in the entrepreneurial literature is in its early stages (Brinckmann, 2008). This article therefore undertakes a literature review of research on entrepreneurial competence in order to:

- Provide an integrated account of contributions relating to entrepreneurial competencies by different authors working in different countries and different industry sectors and at different points in time.
- Emphasise the importance of developing a common framework of competencies as a basis of research and for the design of development programmes.
- Develop an agenda for future research, and practice in relation to entrepreneurial competencies.

The article starts with a review of the development of the concept of competence, with particular reference to its use in the context of management competencies. It then draws together views on the notion of entrepreneurial competencies before exploring and summarising research on the link between entrepreneurial competencies and business performance and growth. A core section then compares the models of entrepreneurial competencies cited in the literature, and on this basis proposes a set of entrepreneurial competencies which can be used as the basis for further research and practice. Finally, the different perspectives adopted by researchers to the measurement of entrepreneurial competencies are reviewed. Conclusions suggest that although the concept of entrepreneurial competencies is used widely by government agencies in their drive for economic development and in strengthening the knowledge base of their countries and regions, the core concept of entrepreneurial competencies and its relationship to entrepreneurial performance and business success is in need of further rigorous research.

The development of the concepts of competency and competence

The terms competency and competence have been much discussed in the managerial literature, and the term competency has been defined from several different perspectives and accordingly has a number of meanings. The term competency was originally used in education to describe trainee teacher behaviours. Subsequently the term has been widely used and discussed in the management domain, initially in the USA and led by Boyatzis (1982). In the USA in the 1970s the idea of competencies was developed as part of an initiative by the American Management Association to identify the characteristics which distinguish superior from average management performance (as discussed in Iles, 1993). Competencies are not seen as the task of the job, but rather that which enables people to do the task. These can be described in terms of essential personal traits, skills, knowledge and motives of the employee that leads to superior managerial performance. Boyatzis (1982) developed his model of managerial competency through a study of over two thousand managers; he identified over 100 potential managerial competencies. An important aspect of this work is the three levels of competencies that it proposes: motives and traits; social role and self-concept; and, role transitions. This work from the American school focussed on the concept of competency as an underlying characteristic of a person, which results in effective

action and/or superior performance in a job. Many other authors have built on Boyatzis's perspective (e.g. Spencer and Spencer, 1993; Williams, 1998; Yukl, 1989).

The UK school had rather a different focus and orientation. In the UK, the focus has been on competence, which is a description of something which a person who worked in a given occupational area should be able to do, or a description of an action, behaviour or outcome which a person should be able to demonstrate. The core agenda, worked out through government sponsored bodies such as the Management Charter Initiative (MCI) and the National Council for Vocational Qualification (NCVQ) has been on securing standards for occupational competence and ensuring that vocational qualifications are based on this. The MCI management competence standards were published in 1990 as a form of competence framework, and the notion of a competence framework has been used for many different professional and vocational groups, such as nursing (Philipsen *et al.*, 2007) and specific groups of managers, such as project managers (Cheng *et al.*, 2005), and global leaders (Brownell and Goldsmith, 2006).

In conclusion the two different terms, competency and competence are linked but distinct. Competence is the evaluation of performance in a specific domain of activity, whereas competency is a class of things that can be used to characterise individuals and their behaviours. Hayton and McEvoy (2006) suggest that there is a further level of confusion that arises from indiscriminate use of terms such as skills, knowledge, and abilities, alongside competencies. Their position is that the unique characteristic of competencies is that competencies are interactional constructs. In other words, they have three parts: individuals' differences, situationally defined behaviour, and socially designed criteria for performance. Competences are distinct from knowledge, skills, and abilities in that they are not only attributes of individuals, but also depend on situation and social definition.

The stakeholders and users of the concept of competency have been important in shaping the meaning associated with the concept. Hayton and McEvoy (2006) argue that, in spite of, or maybe because of the use of the term in practical situations, both academics and practitioners have criticised the term competence as being vague and inappropriate. Further, conceptual clarity has not been aided by the development of the concept of organisational competencies, and the overlap between individual and organisational competencies. An important group of stakeholders in the context of entrepreneurial competencies in recent years has been practitioners in the shape of government policy makers and educators. Policy makers have been concerned with the development of entrepreneurial competencies in order to support business and economic development (e.g. European Community, 1999; Mukhtar and Redman, 2004). Educators have typically identified a role for themselves in developing both students (e.g. Onstenk, 2003), and business leaders as entrepreneurs (e.g. Bergevoet and Woerkum, 2006). Burgoyne (1993) recognises educators and politicians as two groups of stakeholders but also identifies other groups. He suggests that psychologists use the concept as a measure of ability and employ the concept to establish whether the observable performance of a person represents their underlying traits or capacity. Management theorists, according to Burgoyne, apply a functional analysis to define how organizational goals can be best achieved through improved individual performance. On the other hand, human resource managers view and use the concept as a technical tool to implement strategic direction in relation to, for example, recruitment, placement, training, assessment, promotion, reward systems and personnel planning.

Entrepreneurial competencies

This section is the first of three that explore different aspects of the literature on entrepreneurial competencies. This section seeks to summarise literature on the nature of entrepreneurship and entrepreneurial competencies, in general. The following section discusses previous research on the relationship between entrepreneurial competencies and business performance and growth, and thereby demonstrates the significance of entrepreneurial competencies. A final section discusses frameworks of specific entrepreneurial competencies.

The concept of entrepreneurial competency has its foundation not only in the competency and competence literature, but also in the literature of entrepreneurship. Unfortunately, this is another literature in which definitions are elusive. Concepts such as “entrepreneur”, “entrepreneurship” and “entrepreneurial” all remain under active discussion. For example, it may be relatively easy to identify outstanding and publically visible figures such as Bill Gates and Steve Jobs as entrepreneurs, but it is much more difficult to identify the characteristics that make us identify them as entrepreneurs and even more difficult to identify which students or new venture founders are, or might be, entrepreneurs. In particular, it is important to remember that although the term entrepreneurship is often associated with new venture creation and small business management (Gibb, 1996) not all owner managers can be regarded as entrepreneurs, nor are all small businesses entrepreneurial. Further, as discussed earlier, there is an increasing interest in entrepreneurship in larger organisations, termed corporate entrepreneurship (Hayton and Kelley, 2006; Sathe, 2003; Zahra *et al.*, 1999). Nevertheless, if we are going to explore entrepreneurial competencies it is necessary at least to strive towards a definition of the terms entrepreneur and entrepreneurial. Early researchers sought to understand entrepreneurs by seeking to identify the traits and characteristics of an entrepreneur. Unfortunately however, researchers had great difficulty in identifying such a group of traits and characteristics. Very few entrepreneurs possess all the traits and attributes presented in the literature. Lessem’s (1986) response was to propose that there are various types of entrepreneurs, with different clusters of traits, based on personality type. Given the limitations of such trait approaches, entrepreneurship research has focussed on competency theories.

Drawing on the notions of competence and competency in the previous section, and proposed in the context of the discussion of managerial competence, it is possible to study these concepts in the context of entrepreneurship, and to seek to identify those competencies that are associated with successful entrepreneurship.

Entrepreneurial competencies are carried by individuals – the entrepreneurs who begin or transform organisations and who add value through their organising of resources and opportunities (Bird, 1995). In her work Bird (1995), concurs with researchers on managerial competence when she notes the importance of distinguishing between competency which contributes towards success and competence as a minimum or baseline standard. She suggests that the competencies necessary to launch a new venture or to plan a new venture may be conceived as “baseline” and highly effective entrepreneurs are those who go beyond launch into organisations who survive and grow. Of further importance is that competencies are learnable, therefore recognising the importance of competencies and identifying these is crucial for educators and the development of learning opportunities.

Bird (1995) suggests that entrepreneurial competencies are defined as underlying characteristics such as specific knowledge, motives, traits, self images, social roles and

skills which result in venture birth, survival and/or growth. Man *et al.* (2002) defined entrepreneurial competencies as the total ability of the entrepreneur to perform a job role successfully. There is a general consensus that entrepreneurial competencies are carried by individuals, who begin and transform their businesses. Johnson and Winterton (1999) observe that the range of skills and competencies required to run a small firm are qualitatively as well as quantitatively different from those needed in larger organisations. This is at least in part because; in an entrepreneurial context the focus is on the individual (Hunt and Meech, 1991).

Competency theory is based on studying successful leaders, breaking down their behaviours, attitudes and skills into measurable aspects, and looking for ways of bringing them together in order to create individuals who demonstrate superior performance. Skills necessary for successful entrepreneurship may include, for example, oral presentation skills, interpersonal skills, and the ability to prepare and present a business plan (Ronstadt, 1988; Vesper and McMullan, 1988). According to the resource-based theory of the firm, the value creation process of firms is strictly related to the capability of managers in acquiring and developing resources (Grant, 1991; Barney, 1991).

A key aspect of competency research literature is the search for long-lasting individual characteristics leading to success or performance in a job and subsequently, in an organisation (Thomas and Herrisier, 1991). These characteristics can vary from a motive, trait, an aspect of the person's self-image or social role, skill, or a body of knowledge on which the entrepreneur draws (Boyatzis, 1982). In a study conducted by Bartlett and Ghoshal (1997) three categories of competencies, attitudes/traits, knowledge/experience, and, skills/abilities, were identified. Stuart and Lindsay (1997) similarly also defined competencies as a person's skills, knowledge, and personal characteristics.

Entrepreneurial competencies have also been understood in terms of traits, skills and knowledge (Lau *et al.*, 1999) and there has been interest in how these skills are applied in different contexts (Hunger and Wheelen, 1996). Most researchers recognise that there is a major dichotomy in entrepreneurial competencies, and differentiate the entrepreneurial competencies necessary to start a business from those necessary to manage the business through growth (Chandler and Hanks, 1994a, b, c; Chandler and Jansen, 1992; Man *et al.*, 2002).

The next two sections demonstrate how the nature and characteristics of entrepreneurial competencies has been researched, investigated and applied within two main strands of entrepreneurship research, those relating to the impact of entrepreneurial competencies on business performance and growth, and, frameworks of entrepreneurial competencies, respectively.

Entrepreneurial competencies and business performance

One of the main drivers for research and practice relating to entrepreneurial competencies is their supposed association with business performance and growth, and thereby with economic development. Policy makers, in particular, have been concerned about both avoiding small business failure, and promoting business growth. Venture growth has been identified in the literature as a crucial indicator of venture success (Covin and Slevin, 1997; Low and MacMillan, 1998). In the context of entrepreneurship, competencies are particularly related to the birth, survival and/or growth of a venture (Bird, 1995; Baum *et al.*, 2001; Colombo and Grilli, 2005). Research shows that an entrepreneur's skills contribute to venture performance and growth (Lerner and Almor, 2002; Bird, 1995; Cooper *et al.*, 1994). Further, there is evidence that

developing entrepreneurial skills among entrepreneurs contributes to profitability and growth (Chandler and Jansen, 1992).

In this section we draw together insights from research on the relationship between entrepreneurial competence, on both performance, and growth.

In entrepreneurship and SME research the entrepreneur's demographic, psychological and behavioural characteristics as well as their skills and technical know-how are often cited as the most influential factors to performance. The literature highlights three different mechanisms through which competencies can affect performance. First, the more competent entrepreneurs choose to exploit better venture opportunities, the quality of opportunity and the fit matter equally. Second, management competencies are related to venture strategy, the more competent entrepreneurs can formulate superior strategies that fit their business. Resource-based theorists have noted that entrepreneurs and their competencies are a critical and valuable resource of the firms. Bird (1995) suggests since competency refers to the quality of action taken by entrepreneurs, it is directly related to venture outcomes. Chandler and Jansen (1992) operationalise founder competencies identified in the literature and cluster these according to three fundamental roles, traditional entrepreneurial skills; managerial role and technical-functional role. Their results revealed that self reported competencies of founders were correlated with venture performance.

SMEs' competencies are highly linked to the entrepreneurial stage of the firm life-cycle (Churchill and Lewis, 1983). These stages of business development include moving from an entrepreneurially managed business to a professionally managed business. This is when it is possible to recognise the change from individual level competencies (i.e. those of the entrepreneur) to those of the firm. Hofer and Charan (1984) note that an adequate repertoire of managerial skills and training is essential to the transformation from an entrepreneurial organisation to a professionally managed organisation.

During the last two decades, there have been a number of research projects that have sought to develop categories of entrepreneurs along with a variety of different dimensions to better understand and comprehend the growth process. Different authors have identified different skills, knowledge and experience as being at the heart of entrepreneurial success. For example:

- Personal background and experience such as commercial experience, history of innovation, production and marketing experience, status, entrepreneurial experience, and previous contact with venture capitalists (Murray, 1996).
- Basu and Goswami (1999) considered the influence of socio-economic factors such as educational attainment, previous business experience including family background in business and years in business, reliance on bank finance and informal sources of finance at start-up.
- Freel (1999) investigated the skill gaps within small firms and noted that management deficiencies within small firms were postulated to include, for example, poor planning, financial evaluation, inadequate delegation, lack of functional expertise and/or support; discontinuity of management staff and insufficient marketing.
- Intellectual abilities, social abilities and managerial skills and abilities (Gasse *et al.*, 1997).

- Personal qualities such as outgoing personality, approachability, leadership, self-confidence, innovativeness and the ability to engage in risk-taking (Martin and Staines, 1994).
- Behavioural characteristics such as seeing a big picture perspective, spotting unique opportunities, making a total commitment, seeing a need for control, having a utilitarian view of what is right, welcoming uncertainty, using contacts and connections, and embracing competence (Mitton, 1989).
- How managers divide their time between different activities; and, managerial interaction and communication (Florén, 2006).

In a study conducted by Man *et al.* (2002), ten areas of entrepreneurial competencies, also from a behavioural perspective, have been distinguished, namely; opportunity, relationship, analytical, innovative, operational, human, strategic, commitment, learning and personal strength competencies. They were demonstrated to have either direct or indirect impacts on SME performance.

One of the major challenges for a new venture is that both the problems faced and the skills necessary change as the firm moves from one stage of development to another (Churchill and Lewis, 1983). Therefore, understanding the changes required as a consequence of growth is vital as entrepreneur's skills and capabilities, as approaches thought desirable for one stage will be inappropriate for another.

The positive association between the knowledge base of the small business manager and the firm's ability to compete effectively in the marketplace and create economic value has long been an argument for the need to provide management development programs to the small business sector (Gabrielsson and Tell, 2009). Management development is often defined as the process from which managers learn and improve their abilities to plan, organise, lead and coordinate resources in the organisation.

In a survey conducted by the Queen's School of Business in Canada (Orser and Riding, 2003) to investigate management devolvment for growth, the changing role of the entrepreneur during growth is emphasised. They note that the entrepreneur must identify the skills needed at each stage of growth, and choose whether to help existing team members develop new aptitudes, or to face the challenge of adding new talent and skills through recruitment. In some instances they suggest that the founder/founding team with appropriate coaching, education and mentoring can make the transition through all the stages of venture growth, acquiring new skills as their roles change. Canada's fifty best managed companies list the following in order of their top ten challenges: managing growth and change; human resources issues; market development and sales; business planning and strategy; implementing strategies; leadership skills; economic conditions; competitiveness; and, capital and cash flow and taxation.

Frameworks for entrepreneurial competencies

The previous two sections have introduced aspects of entrepreneurial competence by focusing on research on their nature and their role in business success, respectively. This section reviews research that sought to establish frameworks of, or lists of key entrepreneurial skills. First we revisit research on the distinction between entrepreneurial and management competencies, and link these to the three roles, entrepreneurial, managerial, and technical (Chandler and Jansen, 1992) that founders must competently enact in order to achieve success. The focus then switches to

different frameworks proposed by different authors, leading to a summary of key competencies as shown in Table I.

Lerner and Almor (2002) measured a sample of 220 female Israeli entrepreneur's skills on a five point Likert scale. Through factor analysis, they found that managerial skills (finance, human resource management, operations and strategic management)

Entrepreneurial competencies	<ul style="list-style-type: none"> Identification and definition of a viable market niche Development of products of services appropriate to the firms chosen market niche/product innovation Idea generation Environmental scanning Recognising and envisioning taking advantage of opportunities Formulating strategies for taking advantage of opportunities
Business and management competencies	<ul style="list-style-type: none"> Development of the management system necessary for the long term functioning of the organisation Acquisition and development of resources required to operate the firm Business operational skills Previous involvement with start-ups Managerial experience Familiarity with industry Financial and budgeting skills Previous experience Management style Marketing skills Technical skills Industry skills The ability to implement strategy (develop programmes, budgets, procedures, evaluate performance) Familiarity with the market Business plan preparation Goal setting skills Management skills
Human relations competencies	<ul style="list-style-type: none"> Development of the organisational culture management feel is necessary to guide the firm Delegation skills The ability to motivate others individual and in groups Hiring skills Human relations skills Leadership skills
Conceptual and relationship competencies	<ul style="list-style-type: none"> Conceptual competencies Organisational skills Interpersonal skills The ability to manage customers Mental ability to coordinate activities Written communication skills Oral communication skills Decision making skills Analytical skills Logical thinking skills Deal-making skills Commitment competencies

Table I.
Towards an
entrepreneurial
competency framework

and entrepreneurial skills (innovation and marketing) are separate factors. Chandler and Hanks (1994a, b, c) in their research of manufacturing businesses in northwestern Pennsylvania were more explicit regarding this discrimination; they designed a questionnaire to separately measure the two variables. The underlying rationale of their work was that entrepreneurs needed to be competent in two key roles i.e. entrepreneurial (recognise and envision taking advantage of opportunity) and managerial (acquire and utilise resources to co-ordinate the business interest and activities) (Chandler and Hanks, 1994a, b, c).

Shane and Venkataraman (2000) suggest that opportunity recognition and exploitation are focal concepts in entrepreneurship which differentiate entrepreneurship from management. Bird (1988) among others notes the entrepreneurs intentions, e.g. persistence, perseverance as being a key characteristic for developing a new venture.

Entrepreneurship competency studies (Chandler and Jansen, 1992; Herron and Robinson, 1993) developed skill/ability clusters which were similar to those in management/leadership theory; however, two new skills appeared: opportunity, and self-management. Chandler and Jansen (1992) researched a sample of companies in the State of Utah; their study was based on identifying entrepreneurial, managerial, and technical functional functions as the three roles that founders must competently enact in order to be successful. They suggested that effective performance in the entrepreneurial role requires the founder to have the ability to recognise business opportunities and the drive to see firms through to fruition. Effective execution of the managerial role requires conceptual, interpersonal and political competence. To be competent in the technical role they state that founders must be able to use the tools or procedures required in their specialised field.

Various key competencies are associated with the entrepreneurial role, and include recognising and envisioning taking advantage of opportunities (Timmons *et al.*, 1987) and then selecting high quality opportunities to pursue (Hofer and Sandberg, 1987). Other key competencies mentioned include possessing drive, willingness to work long, hard hours (Hofer and Schendel, 1987), and a capacity for intense effort (MacMillan *et al.*, 1985). Miles and Snow (1978) suggested that the entrepreneurial problem is marked by the concrete conceptualisation of an entrepreneurial insight or opportunity. Its solution is characterised by the acceptance of the viability of pursuing such an opportunity and commitment of resources toward achieving such objectives. Founders able to accurately conceptualise an opportunity and then commit the necessary resources in order to solve such a problem are in a position to effectively fill the entrepreneurial role.

Managerial and entrepreneurial competencies are thought to be multidimensional constructs (Smith and Morse, 2005). In their overview of the competencies literature, Smith and Morse (2005) observed that there are two broad themes in managerial competencies, functional competencies such as marketing and finance, and organisational competencies such as the skills related to organising and motivating, personal skills and leadership. Reuber and Fischer (1994) suggest 16 areas of expertise including general management, strategic planning and marketing. In a similar functional approach, Orser and Riding (2003) developed 25 competency scales, which were grouped into nine functional areas. Man *et al.* (2002) in their process/behavioural approach based on a review of previous empirical studies identified six competency

areas under entrepreneurial competencies; these were opportunity, relationships, conceptual, organising, strategic and commitment competencies.

Baum (1994) formed a list of nine entrepreneurship competencies based on the work of others (Chandler and Jansen, 1992; Herron and Robinson, 1993); these were: knowledge, cognitive ability, self-management, administration, human resource, decision skill, leadership, opportunity recognition, and opportunity development. They also contributed another category, organisation skill which included human relations and administration practices. The interviewees discussed knowledge competency, a specific ability or skill, in terms of technical skill and industry experience. The results of his study show that self-efficacy, technical skill, personal marketing, innovation/production focus, and passion for work had the strongest direct positive relationships with venture growth. Vision, organisation skill, growth goals, opportunity skill, industry experience, and participant size had significant, but less positive relationships.

An American study by Hood and Young (1993) to develop a theoretical framework of successful entrepreneurs questioned 100 leading entrepreneurs and chief executive officers of America's fastest growing entrepreneurial firms. A list of knowledge in terms of content skills and mentality was developed. For the skills category the respondents generated 92 responses which were classified into 12 distinct categories. The skill most frequently mentioned, and which was felt to be of most importance was leadership skills, closely followed by human relations skills, oral communications skills and written communications skills. The remaining eight varied in importance; these were: management skills, deal-making skills, logical thinking, analytical skills, decision making skills, goal setting skills, hiring skills, and business plan preparation.

In summary, over the last two decades there have been a number of investigations in different contexts that have sought to generate lists of entrepreneurial competencies, with varying levels of categorisation. Some researchers have used alternative terms such as skills or expertise, but their research generates findings that are relevant to the general field of entrepreneurial competencies. Table I seeks to summarise this work by generating a list that integrates the work of researchers in this area, and is intended to act as a foundation for further empirical work on entrepreneurial competencies. These individual level competencies have been categorised under four main headings which have been labeled as entrepreneurial competencies, business and management competencies, human relations competencies, and conceptual and relationship competencies. It is evident from this list that some competencies have been identified by many authors, while others have received less attention. Also some were identified in relatively early research, and may be viewed as less significant or have changed in their nature in the intervening years. Although we have taken the liberty of consolidating some very similar statements of competencies, we have left others as separate items in this table to demonstrate the variety in the ways in which possibly related competence are described in the literature. From this table it would seem that a significant number of authors agree that the following competences are important for an entrepreneur: management skills, including the ability to develop management systems and organization and coordination skills; idea generation; conceptual and analytical competencies, including the ability to co-ordinate activities; customer management skills; delegation and motivation skills; the ability to recognize and take advantage of opportunities, the ability to formulate strategies for taking advantage of opportunities; hiring skills; decision making skills; leadership skills; and, commitment. As Bird (1995) suggests in interpreting any list or framework of competencies it is important to remember to distinguish between competency that

contributes to excellence in performance, and competency as a minimum standard. Bird (1995) also observes that some competencies have received empirical support, while others are “theoretical and speculative”.

Measuring entrepreneurial competencies

The issue of measurement of competencies is central to both research and practice. The development of frameworks of entrepreneurial competencies, based on the competencies that entrepreneurs exhibit (as opposed to theoretical notions of the competencies that they should exhibit) depends critically on the way in which competencies are measured. In addition, if competence frameworks are to be used in the development of entrepreneurial competencies it is important to be able to measure competencies before and after any intervention and to be able to prioritize the competencies that would benefit from development for specific individuals.

Approaches to measuring competencies have been varied, depending on assumptions and predictions. Chandler and Jansen (1992), and Markman *et al.* (2002) take a similar approach, explicitly taking an antecedent perspective by attempting to delineate key knowledge or abilities thought to reflect entrepreneurial and managerial, competencies, based on reviews of literature, and then having respondents self-assess their own level of competence, or level of agreement with a competence related statement (Smith and Morse, 2005).

Other researchers who have investigated the relationship between entrepreneurial cognitions and entrepreneurial decisions and their outcomes have taken a process perspective in measuring constructs related to entrepreneurial constructs (Mitchell *et al.*, 2002; Shepherd, 1999). In a script-cue recognition methodology adapted from Read (1987), Mitchell *et al.* (2002) measured arrangements, willingness and ability cognitions. This approach was based on expert information processing theory, used a nominal scale where respondents must agree or disagree with given statements.

Researchers such as Lerner and Almor (2002) and Reuber and Fischer (1994) have chosen a performance based perspective by identifying key tasks and then assessing skill acumen, the assessments were subjective self-perceptions. The work of Gist (1987), among others, provides evidence of a strong relationship between perceived and actual competencies. Chandler and Jansen (1992) in their work on assessing entrepreneurial competencies demonstrated discriminant, convergent, and external validity of their subjective self-reported scale. Smith and Morse (2005) suggest that a multi-trait, multi-method approach would enable a rigorous assessment of validity. In their review of the literature they note that the most comprehensive and rigorous development of an expertise scale was conducted by Van der Heijden (2000). Her multi-dimensional expertise measurement instrument focused on professional expertise in general, not on business and entrepreneurial expertise.

Hindle and Yencken (2004) suggest that qualitative methods such as in-depth interviews and case studies would be a good approach when taking into account process and behavioural perspectives of management competencies, and notes that there has been a lack of qualitative work in the area of management competencies. These methodologies may provide insight into competencies from a process perspective, that traditional quantitative methods may not surface (Hindle and Yencken, 2004).

Smith and Morse (2005) note that in order to understand the dynamics and effects of competency, it should be measured, however due to the concept being broad and allusive it is a challenge to begin to measure something which is elusive and slippery

Conclusions and recommendations for practice and research

The search for entrepreneurial competencies to support business success and growth, as well as economic development of countries and regions is akin to the pursuit of the Holy Grail. The ultimate target of the search may be unobtainable or even non-existent, but that does not mean that the journey is not worthwhile and that there are not many interesting experiences and lessons to be gathered along the way. Nor does it detract from the value or enjoyment of investigating the puzzle of understanding the successful entrepreneur. Numerous authors have used the concept of competency to try to understand how people operate and perform in vocational and business contexts, and, in particular, there is a significant body of literature on managerial competencies. This literature usefully distinguishes between competency and competence. Research into entrepreneurial competencies has focussed on competency, or the aspects of a person such as their knowledge and skills that enable them to be competent.

Competency is often not well defined, or not defined specifically at all in some of the literature on competencies. Terms such as competencies, skills, knowledge and expertise are often used interchangeably with insufficient attention to their meaning. This lack of consensus on definition and imprecise use of terminology by both researchers and practitioners hinders the development of a body of knowledge from research initiatives and clarity in practical applications and implementations. In practical contexts it is particularly important that developers are clear as to whether their objective is excellence through competencies, or competence through meeting minimum standards.

For SMEs competencies mean the capability of entrepreneur and of her/his collaborators in acquiring, using and developing successfully resources for their business purpose, in the specific context in which firm operates. Thus a direct link exists between competencies, value creation and the firm's strategy and growth (Capaldo *et al.*, 2004). The management structure and independence of a small enterprise put the entrepreneur-manager in the most critical position in the running of the business. The success and failure of the business depends heavily on the person's competencies (Capaldo *et al.*, 2004; Chandler and Jansen, 1992; Olson, 1987). Understanding the components, dynamics, and effects of entrepreneurial and managerial competency has important economic, social and political implications (Newton, 2001).

Entrepreneurial competencies comprise of components that are deeply rooted in a person's background (traits, personality, attitudes, social role and self-image) as well as those that can be acquired at work or through training and education (skills, knowledge and experience) (Man and Lau, 2005).

Research suggests that entrepreneurs need both entrepreneurial and managerial competencies, and that the later are particularly important as the business grows and to support successful business growth. New-venture founders often find themselves unprepared to manage growth-related transitions effectively (Galbraith, 1982). An understanding of the organisation life cycle and the associated management imperatives could aid entrepreneurial founders through the uncharted course of firm growth. Entrepreneurial and managerial competencies differ by stage of firm development (Gasse *et al.*, 1997), and by context (Capaldo *et al.*, 2004).

As this review suggests understanding competencies is challenging. Burgoyne (1989), for example, explained the difficulties in identifying core management competencies.

These include: measurability and divisibility of competencies; generalising skills over different categories of manager; the changing nature of managing; accommodating different styles and strategies of managing; and how individual competence contributes to and integrates into collective or organisational competence. Similarly, for entrepreneurial competences there are challenges associated with: differentiating one competency from another; measurement and identification of competencies; understanding the differences between competencies for different contexts; appreciating the relationship between personal style and entrepreneurial behaviours; and, understanding the impact of entrepreneurial competencies not just on business performance, but also on staff and customer's experience of the business. It is therefore, perhaps not surprising that many frameworks and lists of entrepreneurial competencies have been developed, and that while there is some overlap between these frameworks there are also differences. The empirical research and theoretical propositions that have led to these frameworks derives from a range of different contexts. This article has sought to generate an integrative list of entrepreneurial competencies which have been grouped into four categories (see Table I), that can be used as a basis for further research. While we acknowledge that the defining characteristic of competence, as opposed to say, skill, abilities or knowledge is that it is contextual and situational (Hayton and McEvoy, 2006), this does not necessarily imply that the search for a general model or framework is fruitless. It does, however, strengthen the case for a high level of subtlety and sophistication in the construction and application of such a framework. This might, for instance, mean, initially establishing that there are indeed a unique set of characteristics that apply to all of those who can, have or might be entrepreneurial in business and community contexts. It also involves acknowledging that there are inter-relationships between competencies. For example, in Table I managerial competencies and leadership competencies are shown as distinct competencies, but there is general agreement that there is considerable overlap between these competencies. Another significant issue is whether it is possible to prioritise some competencies over others, either in general, or more likely, in relation to specific contexts. If, indeed, some competencies are more important in some contexts than in others, there is work to do in profiling those characteristics of contexts that determine the entrepreneurial competences that are suitable in different environments.

In summary, there has been considerable discussion about entrepreneurial competencies; they have been investigated by researchers, and the concept has been widely used in practice, but there is scope for considerably more theoretical and empirical work (Brinckmann, 2008). Within the competency literature, there are close links with other disciplines such as leadership and management competencies. Management competencies are about what managers should be able to do (Ruth, 2006), whereas both leadership and entrepreneurial competencies are more about how people behave and developing leadership and entrepreneurial competencies is about helping people to learn to behave in certain ways (Bonnstetter, 1999). It is therefore possible that competencies in the context of leadership and entrepreneurship, while as individual concepts might be much less easy to measure than managerial competencies, can still be recognised and offer a valuable framework for reflection and development. It is only with a common framework that we can start to test out whether this is the case.

The best empirical work is likely to be closely coupled with practice, but to be alert to the potential impacts of context. Specifically, some areas for further work include:

- (1) The development and implementation of a consensus on the use of terminology in the entrepreneurial competency literature, in both academic and practice arenas. This includes a clearer notion of the concept of “entrepreneur”, so that it is possible to identify corporate entrepreneurs, and to differentiate between those small business owners who are entrepreneurs and those who are not.
- (2) The development of an entrepreneurial competency framework which can act as a basis for investigating the essential nature and processes of entrepreneurship and support comparisons across sectors, training and development, and economic development policy and investment.
- (3) Further work on the relationship between different entrepreneurial competencies, specifically, but not exclusively, to fuel understanding of:
 - the relationship between entrepreneurial and managerial competences through different stages of business growth; and
 - the relationship between individual and organisational competencies.
- (4) The development of an improved understanding of context (such as industrial sector, dynamism of marketplaces, and customer type) on the exercise and development of entrepreneurial competencies, including further insights into the ranking of competencies. Empirical research must both search for generic frameworks while also recognising the heterogeneity of small firms across different industry sectors.
- (5) The development of an improved understanding of the impact of personal variables (such as gender, age, experience) on competencies exhibited by individual small business owners and entrepreneurs.

This article has started to make a contribution to a more integrated understanding of entrepreneurial competencies, but it is evident that more work needs to be done in this important research area.

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