

Formulating a convincing rationale for a research study

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Abstract

Explaining the purpose of a research study and providing a compelling rationale is an important part of any research project, enabling the work to be set in the context of both existing evidence (and theory) and its practical applications. This necessitates formulating a clear research question and deriving specific research objectives, thereby justifying and contextualising the study. In this research note we consider the characteristics of good research questions and research objectives and the role of theory in developing these. We conclude with a summary and a checklist to help ensure the rationale for a research study is convincing.

Keywords: rationale; research question; research objective; theory

Introduction

Research is about systematically obtaining and analysing data to increase our knowledge about a topic in which we are interested. In undertaking research, we are trying to answer a question or address a problem, this often being referred to as ‘meeting the research aim’ or ‘addressing the research objectives’.

However, research problems, questions, aims or objectives need to be stated clearly and justified in order to overcome ‘so what?’ or ‘why bother?’ questions. In other words, we need to state the purpose of the research and provide a clear rationale as to why this purpose is important, in relation to both existing knowledge (including theory) and, often, with regard to the implications for practice.

The purpose of this research note is to offer clear guidance regarding how to formulate a research question and research objectives and provide a convincing rationale for a research study. Research methods texts (for example Gray, 2009; Robson, 2011; Saunders, Lewis & Thornhill, 2012) consistently argue that a clear research question and/or research objectives supported by a convincing rationale that is justified by the academic literature is an essential building block for high quality research. We therefore commence by outlining and explaining the characteristics of good research questions. Next, we consider how to refine a research question into precise research objectives. We then explore the use of theory in

developing and providing a convincing rationale for both research questions and research objectives, concluding our note with a summary and checklist.

The characteristics of good research questions

Having a good understanding of what it is we are going to research is vital at the beginning of the research process and formulating a clear research question is instrumental to this endeavour. Without this, and even though we may have some explicit ideas about our research, planning and conducting the study is challenging. Not specifying the research at the outset of our study as a question we wish to answer, or a series of objectives to be met, will make the entire research process fraught. The research question and research objectives provide direction regarding the data we need to collect (to answer it!) and the precise focus of the conclusions based on our study's findings.

Formulating a research question is an intellectually challenging and time-consuming undertaking (Saunders & Lewis, 1997). The wording of the question is crucial, as we need to ensure that the answer we find through our research will provide new knowledge about a topic or look at a theme from a different angle, and, for readers of this journal, be of interest to those concerned with the theory and the practice of coaching. As such, we can characterise a suitable (coaching) research question as one that is grounded in what we already know (from relevant literature in coaching) and also appears likely to provide new insights into the topic being investigated.

In the context of 'insights', we can distinguish between two basic types of questions: descriptive and explanatory. Descriptive research questions typically start with 'What', 'When', 'Where', 'Who' or 'How' (e.g. 'What percentage of coachees report that coaching helped them with a problem they experienced?'). Although relatively easy to answer, on their own these rarely provide new insights into theory. Explanatory (sometimes termed evaluative) questions on the other hand usually start with 'Why' (e.g. 'Why did 65% of coachees report that coaching helped them with a problem they experienced?'). Not surprisingly, these require prior knowledge of what is occurring – for example, the fact that 65% of coachees had reported that coaching helped them with a problem they experienced. They are also more challenging to answer since they require the researcher to provide an

explanation regarding why something happened and relate this to what is already known, providing theoretical insights.

In reality, our research questions more often than not start with ‘What’ or ‘How’ to find out precisely what is occurring. They then go beyond description, by also seeking evaluative answers. Questions such as ‘How effective is the coaching process at helping coachees to solve a problem they experience and what are the reasons for this?’ or ‘To what extent is the coaching process effective at helping coachees solve a problem and why?’ require not only description, but also explanation. Such descriptive-explanatory questions can, like explanatory questions, provide a firm base for research.

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We have asserted that some research questions may require descriptive answers and offer few insights – yet, unless we phrase explanatory questions carefully, we may be faced with questions that are not specific enough to be suitably addressed within our research study. An example of an insufficiently specific question might be: ‘In what ways do coachees report that coaching helped them with problems they experienced and why?’. Such a question is extremely wide ranging and likely to generate long lists of ways, which may or may not be directly related to the coaching process (maybe the decision alone to seek out coaching triggered a thought process about the solution for the problem). This is likely to make it difficult to establish what is actually occurring from within the myriad of interrelationships between potentially relevant ways and problems.

In terms of timing, whilst a research question is usually decided at the very beginning of a study, it will invariably be amended and refined as the research progresses and more becomes known, particularly from reviewing academic literature (Saunders & Rojon, 2011). Some (e.g. McNiff & Whitehead, 2000) argue this is less likely the case for practitioner-led action research, since determining the research question(s) may be part of a ‘progressive illumination’ process. However, it is important to note that for such studies the research question, often expressed in a series of research objectives, usually forms a key part of the research contract between the practitioner-researcher and the organisation (Saunders, 2011). This means subsequent amendments may be difficult!

Formulating research objectives

In order to formulate research objectives, we have found it helpful to start with just one research question, which may be specified by employing the ‘Russian doll principle’ (Clough & Nutbrown, 2002). In a similar way to the Russian doll being disassembled to eventually reveal a minuscule doll, this entails disassembling or removing the various layers of the initial research question to arrive at its core. Subsequently, our overall research question may form the basis for determining more precise investigative questions or research objectives that we need to meet in order to answer our overall research question (Saunders et al., 2012).

In comparison to a research question, research objectives are more specific, giving a clear indication of the research purpose and direction and providing additional information over the research question. Whilst a research question indicates the topic or issue of the study, research objectives operationalise the question, in other words they state precisely what needs to be researched. Research objectives are therefore instrumental in enabling the research question to evolve into an actual study.

To operationalise our research question and formulate research objectives that are fit-for-purpose, we need to ensure these are i) transparent (i.e. comprehensible and unambiguous), ii) specific (i.e. the precise research purpose and how it will be achieved is apparent), iii) relevant (i.e. clearly linking to the study as a whole), iv) interconnected (i.e. representing a coherent entity), v) answerable (their planned outcome is attainable) and vi) measurable (i.e. specifying when the outcome will be achieved) (Saunders & Lewis, 2012). Formulating research objectives will usually necessitate more rigorous thinking compared to writing a research question as the former are more precise and provide additional information over the latter (Table 1).

Insert Table 1 about here

Using theory

Theory plays an integral role in the development of a research question and research objectives. To illustrate this, we draw on Whetten (1989), who identified four components of theory, namely ‘what’, ‘how’, ‘why’ and a fourth group of ‘who’, ‘where’ and ‘when’.

The first of these components is concerned with the variables or concepts that the theory considers. A theory used in coaching such as goal setting theory (e.g. Locke & Latham, 2002) examines goals as a concept, in other words something an individual or group is intending to achieve. This theory sees goals as important for the regulation of human behaviour, indicating that the action of setting goals can be a powerful leverage for individuals' progress.

The second element is concerned with how these variables or concepts are related. If we consider goal setting theory in the context of coaching research, a research question might examine the relationships between the use of goal setting theory in coaching and the success of the coaching process. It is clear from this that theory is concerned with causality, in other words with cause and effect. We are interested in understanding whether and how the setting of goals impacts on the success of the coaching process.

The third component considers why these variables or concepts are related; in other words the reasons for the relationships between the variables or concepts. Thus, whilst 'what' and 'how' can be understood as descriptive components, the 'why' is explanatory (Whetten, 1989). The distinction between 'how' and 'why' may become more apparent by considering our example: Previous research findings may suggest that goal setting can be an effective tool for coaching, mainly in the early stages of the coaching process. As such, other researchers have already examined the 'how', observing there is a relationship between the two variables of goal setting and coaching success. Yet, we still need to answer the 'why' question – 'why is there an apparent relationship between goal setting and coaching success?' and also 'why is the relationship more apparent at the early stages of the coaching process?' We therefore use existing theory to support our use of logical reasoning when suggesting possible reasons (suggesting answers to 'why'). Within this we base our argument on our knowledge from previous research about the 'what' and 'how' ('reasoning'). We therefore use previous research to both identify what is already known and where there are gaps in our knowledge, thereby informing and justifying our research objectives (Saunders & Rojon, 2011). Drawing on our logical reasoning, we may develop a theoretical model to predict new outcomes following a manipulation of its variables or concepts. In our example, our theoretical model may predict that success in the coaching process following goal setting will translate into improved workplace outcomes, such as higher job satisfaction or increased job performance.

It is important to recognise, however, that the existing theory we use will invariably be based on research that is both context and time-bound. This is what the fourth group of Whetten's elements addresses: who does this theory apply to; where does this theory apply; when does this theory apply? Referring again to our example, we may have realised that much previous research was undertaken with senior executives, rather than middle managers. Furthermore, we may have recognised that whilst the conclusions are applicable to Western European cultures, we can be less certain of their relevance to other cultures. These 'gaps' in theory can be used to refine the focus of our research as well as justify our research question and objectives, emphasising why our research findings are likely to be valuable.

Thus far, we have highlighted how theory and related literature may present us with ideas for a study (Lewin, 1945; Van de Ven, 1989). Yet, besides this, good theory may also suggest important areas for future research. In this way, we may be able to derive a research question and a set of variables or concepts from theory and use these to examine the extent to which and the reasons why they may be related in the context of our own research (Saunders & Rojon, 2011).

Summary

Research questions need to be phrased to allow theoretical explanations to be developed (even if these are limited). A research question such as 'How satisfied are employees with the introduction of coaching as a tool for personal development?' will not lead to a theoretical explanation, but rather a descriptive outcome. Rephrased as 'What are the implications of introducing coaching as a development tool for employee productivity and why?', it encourages the researcher to examine relationships and their potential source, providing theoretical explanations.

Being able to provide meaningful explanations requires answers to 'why' (i.e. explanatory) questions in addition to 'what' (i.e. descriptive) questions. Data from opinion surveys, for example, may allow the researcher to derive clear conclusions only if respondents have been asked about their beliefs as well as the reasons for holding such beliefs (Mackenzie, 2000a; 2000b). Take the following survey extract: 'To what extent are you satisfied with the range of opportunities for personal development provided by your company.' This question is likely to require respondents to answer using a satisfaction scale with scale points such as 'very

satisfied', 'reasonably satisfied', 'slightly satisfied' and 'not at all satisfied'. Whilst the data gathered from this question may be useful for analytical purposes, for example to indicate the level of satisfaction at an organisational or departmental level, it is not possible to draw conclusions or recommendations from it, since we cannot provide a rationale for the level of satisfaction.

Having formulated your research question and objectives, it is important to ensure that these represent a convincing rationale for your study. To support researchers in this, we conclude by offering the following questions as a summary checklist:

- (1) Does your research study add value through one of the following options:
 - a) it addresses a new topic
 - b) it promises new insights into a topic by examining it from a different angle
 - c) it replicates research to corroborate earlier findings?
- (2) Is your research study of interest to those concerned with the theory and the practice of coaching?
- (3) Does your research question provide a clear link to relevant theory and related literature?
- (4) Does your research question require an answer that necessitates evaluation?
- (5) Do your research objectives state clearly how the topic being investigated will be operationalised, in other words do they address the 'how' of your study?
- (6) Are your research objectives fit-for-purpose, in other words meet the criteria of being transparent, specific, relevant, interconnected, answerable and measurable?
- (7) Have you used logical reasoning to explain and justify your research objectives?
- (8) Will you be able to draw meaningful conclusions and recommendations from data that are gathered to meet your research objectives?

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Table 1. Deriving research objectives from research questions.

| Research question | Research objective |
|---|--|
| 1. Why have organisations introduced coaching programmes for senior managers? | 1. To identify organisations' objectives for coaching programmes targeted at senior managers. |
| 2. How can the effectiveness of coaching programmes for senior managers be measured? | 2. To establish suitable effectiveness criteria for coaching programmes aimed at senior managers. |
| 3. Have coaching programmes for senior managers been effective? | 3. To describe the extent to which the effectiveness criteria for coaching programmes for senior managers have been met in published studies. |
| 4. How can the effectiveness of coaching programmes targeted at senior managers be explained? | <p>4a. To determine the factors associated with the effectiveness criteria for senior managers' coaching programmes being met.</p> <p>4b. To assess whether some of those factors are more influential than other factors.</p> |
| 5. Can the explanation be generalised? | 5. To develop an explanatory theory that associates certain factors with the effectiveness of coaching programmes targeted at senior employees. |



Adoption of E-Commerce by SMEs in the UK

Towards a Stage Model

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Research has shown that small and medium-sized enterprises (SMEs) are rapidly adopting the Internet and e-commerce. However, there is little systematic research into how such companies are adopting this new technology. This study addresses the research gap by seeking to understand how SMEs in the UK are adopting e-commerce, through an exploration of their level and sequence of adoption. The research, which was carried out by means of a mailed questionnaire, found four distinct clusters of adoption. These formed a set of sequential stages, through which firms appear to pass during the adoption of e-commerce. The firms in the first cluster are currently developing their first e-commerce services; the second adoption cluster are using e-mail to communicate with customers, suppliers and employees. Those at the third level of adoption have information-based websites operating and are developing on-line ordering facilities. The most advanced adopters have on-line ordering in operation and are developing on-line payment capabilities. The association of the adoption stage currently reached by a firm with contextual variables both at an industry and an organizational level is investigated and discussed.

KEYWORDS: adoption; e-commerce; SMEs; stage model

Introduction

Electronic commerce is one of the most discussed topics in business today. It is already leading to the reshaping of customer and supplier relationships, the streamlining of business processes and, in some cases, even the restructuring of whole industries. Forecasts have estimated that the total value of e-commerce around the world will exceed US\$400bn by 2002 (IDC, 2000). Much of the media coverage of e-commerce concentrates on 'born to the web' companies such as Amazon.com or eBay.com, or its adoption by large, traditional 'bricks and mortar' companies. However, small and medium-sized enterprises (SMEs) are also increasingly making use of the Internet. Research by Oftel (2000) has found

that 49% of SMEs in the UK are connected to the Internet and a further 20% intend to be connected in the near future. Despite this rapid take-up of the Internet by smaller companies, there is little systematic research into how such companies are adopting this new technology beyond these raw statistics on connectivity.

This study addresses this gap in current research by seeking to understand how SMEs are adopting e-commerce through an exploration of their level and sequence of adoption. Drawing on previous studies, it is proposed that SMEs are likely to adopt e-commerce in a set of sequential steps or stages. At each stage they will develop certain e-commerce services from which they will gain experience and hence dissipate uncertainty and risk, which will be of benefit when they proceed to develop further services.

This study will be of value to SMEs considering e-commerce and those at the early stages of adoption, since it delineates the route travelled by other similar firms. It will also be of value to those that supply services and solutions to these SMEs, since it will provide evidence on which such advice and products can be based.

The article commences with a description of existing literature in this domain and presents two research propositions that guide this study. The methodology adopted is then described and the findings are presented and discussed.

E-Commerce Adoption by SMEs: Existing Literature

Due to the relative youth of e-commerce, there are not yet widely agreed definitions of what is meant by this term. Kalakota and Whinston (1997) define e-commerce as 'the buying and selling of information, products and services via computer networks' (p. 3), the computer networks primarily being the Internet. Others (The Cabinet Office, 1999) use the term to encompass not only the buying and selling described above but also the use of Internet technologies, such as email and intranets, to exchange or share information either within the firm itself or with external stakeholders. It is this latter, wider definition of e-commerce that is used in this study.

It has been observed that e-commerce is not a simple innovation; rather it is a cluster of separate innovations (Prescott and Conger, 1995; Van Slyke, 1997; White et al., 1998). Companies can choose which of these innovations they make use of and in what sequence. This view is supported by the limited number of studies that have been undertaken to date on the use of electronic commerce in the specific context of SMEs, which include Hamill and Gregory (1997), Webb and Sayer (1998), Dutta and Evrard (1999) and Poon and Swatman (1999). These studies identify a wide range of business activities for which SMEs are using e-commerce, summarized in Table 1, reinforcing the observation that e-commerce is a cluster of separate innovations.

In further considering the adoption of e-commerce by SMEs, we are guided by the views of authors such as Frank (1988), Dosi (1988) and Reid and Smith (2000), who regard small firms as organizations that gain experience and knowledge in a sequence of steps or stages. Achievement of the first stage of a project

Table 1. E-Commerce Activities

| <i>Activity</i> | <i>Previous Study</i> | <i>Variable Name in Current Study</i> |
|--|---|---------------------------------------|
| Providing information on company | Hamill and Gregory (1997) | COINFO |
| Providing information on goods or services | Webb and Sayer (1998); Dutta and Evrard (1999); Poon and Swatman (1999) | GOODSINFO |
| Taking orders | Webb and Sayer (1998); Dutta and Evrard (1999); Poon and Swatman (1999) | ORDERS |
| Receiving payment | Webb and Sayer (1998); Dutta and Evrard (1999) | PAYMENT |
| Delivery (of digital goods or services) | Webb and Sayer (1998) | DELIVERY |
| After sales service or contact | Webb and Sayer (1998) | AFTERSALES |
| Identifying new inventory suppliers | Dutta and Evrard (1999) | INVSUPPLIERS |
| Ordering and payment of inventory purchasing | Dutta and Evrard (1999) | ORDERINVENT |
| Non inventory purchasing (such as travel, stationery) | Dutta and Evrard (1999) | NONINVENT |
| Communication (email) with customers or suppliers | Hamill and Gregory (1997); Dutta and Evrard (1999); Poon and Swatman (1999) | CUSTCOMM |
| Internal communication between employees | Hamill and Gregory (1997); Dutta and Evrard (1999); Poon and Swatman (1999) | INTCOMM |
| Document and design exchange with customers or suppliers | Hamill and Gregory (1997); Dutta and Evrard (1999); Poon and Swatman (1999) | DOCEXCH |
| External information search, e.g. competitors, regulations | Hamill and Gregory (1997); Dutta and Evrard (1999) | INFOSEARCH |
| Communication with shareholders and investors | Webb and Sayer (1998) | SHARECOMM |
| Advertising | Hamill and Gregory (1997); Dutta and Evrard (1999); Poon and Swatman (1999) | ADVERT |
| Recruitment | Webb and Sayer (1998) | RECRUIT |

or development allows the organization to gain experience, which it can then use to its benefit to move on to the next stage of development, at which point it will gain further experience. Stage models have been developed and applied in the fields of growth of technology-based new ventures (Drazin and Kazanjian, 1990,

1993) and are particularly well accepted in the field of internationalization. The stage model proposed by Cavusgil (1980) states that firms progress through five stages of internationalization. This has been tested and found to be valid in small businesses by a number of authors, such as Bell (1995), Reuber and Fischer (1997) and the longitudinal study by Gankema et al. (2000).

A limited number of studies have sought to measure the level of e-commerce adoption (White et al., 1998) or of other IT adoption in SMEs (Smith, 1999), but we are unaware of other studies that have demonstrated a sequence of stages of adoption in this domain.

Research Propositions

In accordance with the approach adopted by Bailey and Johnson (1996), the empirical component of this article, which is inductive in nature, is structured around the exploration of two deductively derived research propositions.

The observation that e-commerce is a cluster of innovations and the staged approach to the adoption of new knowledge and experience together lead us to expect that SMEs will adopt e-commerce in a sequence of stages. This leads to our first proposition:

P₁: The adoption of e-commerce by SMEs typically proceeds in a set of sequential stages.

It has been argued (Pettigrew, 1985) that the development of strategy by firms must be considered within the context in which the firm operates. For example, managers within different industry sectors are faced with different environmental contexts and are therefore likely to develop different strategies. Different types of organizations in terms of size, revenue and location, even within the same industry, are also expected to develop distinct strategies. We therefore expect that the current level of usage of e-commerce by SMEs, that is their stage of adoption, will depend upon contextual variables both at an industry and organizational level. This leads to our second proposition:

P₂: The stage of adoption currently reached by a firm will depend on contextual variables both at an industry and an organizational level.

Method

Survey Instrument

The research was carried out by means of a mailed questionnaire which commenced by stating a simple definition of e-commerce that we wished respondents to adopt when completing the survey. The questionnaire contained five sections. Sections 2 and 5 are relevant to the findings discussed in this study. Sections 1, 3 and 4 explore other areas of e-commerce adoption and will be analysed in future publications.

Section 2 measured the extent of e-commerce adoption. In accordance with White et al. (1998) in their study of web adoption by the publishing industry,

adoption is measured according to business activities undertaken on-line, rather than the technology features or platforms utilized. In order to measure the adoption variables shown in Table 1, the corresponding activity descriptions from the first column of the table were listed. Respondents were asked to indicate whether they currently did or did not use e-commerce for each activity or whether they had such a service under development. Section 5 elicited contextual information on the company, such as its market sector and size by both turnover and employee numbers.

The survey instrument was piloted with 21 SMEs. This highlighted a number of issues that were addressed in the final survey design.

Population Definition

The population of interest for this study is SMEs who are using or developing e-commerce services, where SMEs are defined in accordance with the UK Department of Trade and Industry (DTI, 1999), as firms with less than 250 employees. No other constraints were placed on the population, such as industry sector or geographic location. Indeed it was preferred that a wide spread in other variables could be achieved in order to ensure that results obtained have the widest applicability amongst SMEs.

Sample Selection

Two samples of SMEs were used in this study. First, a database of SMEs that is held within Cranfield School of Management was used. This contains companies that have attended an executive education programme aimed at SMEs or who have made enquiries about such a programme. The database held 1500 names and company addresses, all of which were believed to have 250 or less employees. The companies covered a wide range of industry sectors and were distributed throughout the UK.

Second, 5000 names and company addresses were bought from a commercial database company. Companies were chosen from their records on the basis that they had 250 employees or less. It was ensured that the sample selected covered a representative range of industry sectors and locations throughout the UK. The mailings of questionnaires to the two samples were both undertaken in March 2000 and all responses were received by the end of April 2000.

It was not known from the database if the companies were using or considering e-commerce. However, since there is such a high degree of interest in this subject, it was expected that many of the companies would be. It was decided to allow companies not considering or using e-commerce to 'de-select' themselves from the sample. They could do this in two ways. First, and it was expected that this would be the most frequent approach, companies not interested in this subject would not complete and return the survey. Second, if they wished to return the survey they could indicate on it that they are not considering e-commerce services and give reasons for this.

Responses from the two samples were analysed separately and the results compared. No significant differences were found between the two samples and so this article presents results based upon the combination of these two samples.

Response Rate

The total number of responses received was 766 (total response rate 11.8%). Of these, 46 were rejected as representing companies with more than 250 employees and a further 42 were not included since the respondents reported that their organizations were neither using e-commerce nor considering its use. Hence 678 usable responses (effective response rate 10.4%) were used as a basis for the findings of this study. Analysis of the responses received according to company size are shown in the Appendix to this article. Responses from small companies, taken here as between 6 and 50 employees represented 51% of those received and those from medium-sized companies, taken as between 51 and 250 employees, represented 43% of those received. The remaining responses were from micro firms with 5 employees or less.

Non-Response Bias

The method of determining non-response bias adopted in studies such as Goode and Stevens (2000) was adopted for this study. In this method the earliest responses to be received are compared with the responses received later. The usable responses were split into two equal sets of 339 responses according to the dates on which they were received. No significant differences were found for any of the five sections contained in the survey instrument. It is therefore concluded that the responses received are unlikely to contain a non-response bias.

Findings of the Study

Staged Adoption

The questionnaire presented a list of activities for which e-commerce could be used. Respondents were asked to indicate for each activity whether they currently used e-commerce, had a service under development or did not use e-commerce. Cluster analysis was carried out on the responses using the complete set of activity variables according to Ward's (1963) minimum variance method. Cluster analysis is a technique for grouping cases or entities (in this case firms) into groups that are coherent according to the attributes of interest (here this is activities being undertaken by e-commerce) whilst also distinguishing each group from others that differ according to these attributes. It is inductive in that the number and characteristics of the groups are not known prior to the analysis. Clustering was carried out with three, four and five clusters and the cubic cluster criteria generated for each. A large increase in this measure at the four cluster level suggested the suitability of a four cluster solution. The four cluster solution also met a secondary criterion that there is a sufficient number of cases in each cluster to allow statistical analysis.

In order to identify the adoption characteristics of the four clusters a cross-tabulation of the responses by cluster for each activity was generated and is presented in Table 2. A chi-squared analysis of the responses for each activity (each row of the table) was undertaken and was found to be significant for all of the activities proposed (significance < 0.0001), demonstrating that the clustering technique adopted was able to produce clusters that are significantly distinct

Study finds women entrepreneurs in Caribbean not opportunity driven

A new study analysing the characteristics and challenges facing women entrepreneurs in Jamaica and eight Latin American countries has found that they are opportunity driven rather than necessity driven.

The study also found that these women mention economic independence, passion and creating jobs as their main reasons for launching their business ventures. The new study titled “WEGrow:- Unlocking the Growth potential of Women Entrepreneurs in Latin America and the Caribbean” was commissioned by the Multilateral Investment Fund (MIF), a member of the Inter American Development Bank (IDB) Group and produced by Ernst & Young.

It analyses high-growth women entrepreneurs in Argentina, Brazil, Chile, Colombia, Costa Rica, Jamaica, Mexico, Peru, and Uruguay, whose businesses have experienced growth rates of more than 20 per cent for at least three years and compares them to those of their male counterparts, as well as those who reach lower growth rates. It is based on interviews with over 400 entrepreneurs and other stakeholders in the region’s entrepreneurial ecosystems in the nine countries.

According to the study, 85 per cent of high-growth women entrepreneurs have the ambition to keep growing their business. The IDB said that these high-growth businesses belong to traditional or non-mature sectors such as food and beverages and services, which tend to have lower rates of potential growth than sectors like software and Internet, which are preferred by high-growth men entrepreneurs.

“These women can be an important source of growth because they create jobs, promote innovation and reduce the gender gap,” said Nancy Lee, MIF general manager. “But until now, there has been very little research on who they are and how they see their successes and challenges. We believe that this study will be very valuable in helping them grow their businesses, which will not only benefit women entrepreneurs themselves and their families, but will also have significant economic impact,” she said.

According to the study, several barriers related to the sex of women entrepreneurs lessen or disappear as their business grow. “Although many women mentioned that they had more difficulties than men when they started, 88 percent of high-growth women entrepreneurs stated that being a woman was not an obstacle to growing a business,” the IDB said.

It noted that women entrepreneurs initially imagine their businesses to be more restricted in reach. However, once the business grows their ambitions match those of male entrepreneurs. Only 40 per cent of women’s businesses have international reach, while 71 per cent of men’s businesses cross borders. “Although these results are very positive in terms of the advancement of women in the entrepreneurial world, there are still challenges,” said Susana García-Robles, MIG Principal Investment Officer.

“Their networks aren’t as extensive and diversified as those of men, since they tend to partner with friends and family. As a result, women entrepreneurs have difficulties in accessing finance, especially from angel networks and seed and venture capital funds,” she said. —CMC

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WOMEN LEADERS— CHALLENGES, SUCCESSES, AND OTHER INSIGHTS FROM THE TOP

DEBBIE SALAS-LOPEZ, LYNN M. DEITRICK, ERICA T. MAHADY,
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The reasons for the persistent lag of women as leaders are complex. Attrition is an issue for women for many reasons, including traditional gender roles that may affect how women are perceived and the choices they have available (or they make), a lack of role models, the undervaluing of women's traditional communication and leadership styles, and organizational culture. Within medicine (clinical environments) and academic medicine (medical school and clinical environments), it is clear that the lack of women in leadership positions is more than a pipeline or a labyrinth problem. We undertook this case study to better understand the current challenges experienced by women aspiring to leadership positions in medicine and academic medicine. What types of challenges do women face as they move up in an academic or medical environment? And which challenges impact more than others in attaining leadership roles in these organizations: race and ethnicity, differences in leadership style and skills, mentorship and network, life experiences and family responsibilities, organizational culture, or gender? Our study addresses a gap in the literature by examining the leadership experiences of eight successful women in the fields of medicine and academic medicine. The emerging insights from these leaders may be useful for women from diverse backgrounds aspiring to be senior leaders in the future.

Introduction

Many have recognized that the advancement of women to leadership positions continues to lag well behind that of male counterparts. Reports and studies done over the years document this phenomenon in all areas of industry, including government, higher education, business corporations, medicine, and academic medicine. Their conclusions have revealed that although we have near parity in the workforce, particularly at the beginning of career stages, women have not yet reached parity at the senior and leadership levels (Bystydzienski & Bird, 2006; Dannels et al., 2009; Helfat, Harris, & Wolfson, 2006; National Research Council [NRC], 2007; West & Curtis, 2006).

The reasons for the persistent lag of women as leaders are complex. Attrition is an issue for women for many reasons including traditional gender roles that may affect how women are perceived and the choices they have available (or they make), a lack of role models, the undervaluing of women's traditional communication and leadership styles, and organizational culture (Dannels et al., 2009). Many metaphors have been used to describe this phenomenon. Most recently, the trajectory of women to leadership roles has been compared to a "leaky pipeline" or a labyrinth (Eagly & Carli, 2007; Helfat, Harris, & Wolfson, 2006).

Within medicine (clinical environments) and academic medicine (medical school and clinical environments), it is clear that the lack of women in leadership positions is more than a pipeline or a labyrinth problem. For example, since 2003, medical school admissions for men and women have been virtually equal (Association of American Medical Colleges, 2009). Currently, only 18% of full professors are women and only 13% of department chairs are women. In 2008, 14 schools reported no women with a direct reporting relationship to the dean, up 40% compared to prior year (Association of American Medical Colleges, 2009). The evidenced scarcity of women in leadership positions in medicine and academic medicine is even more obvious in light of the mounting evidence of the business case for gender diversity (Catalyst, 2004; European Commission, 2006). In a study done by Dannels et al. (2009) of medical school deans, they found that the deans perceived gender inequity in "(1) lack of appropriate representation of women in senior positions, (2) a condescending attitude

toward women on the part of some faculty continues to exist, (3) time alone is insufficient for women to move into leadership positions, and (4) time alone is insufficient to improve the institutional environment for women" (p. 75).

To add to the complexity, a new generation of students and faculty, both male and female, will seek to achieve a work-life balance that may impact their career choices and decisions to accept a leadership role. The recognized paucity of women in formal leadership positions and the benefits of a diversified workforce call for studies that examine the qualities and characteristics needed for successful women leaders.

We undertook this case study to better understand the current challenges experienced by women aspiring to leadership positions in medicine and academic medicine. What types of challenges do women face as they move up in an academic or medical environment? And which challenges impact more than others in attaining leadership roles in these organizations: race and ethnicity, differences in leadership style and skills, mentorship and network, life experiences and family responsibilities; organizational culture, or gender? The study addresses a gap in the literature by examining the leadership experiences of eight successful women in the fields of medicine and academic medicine. The emerging insights from these leaders may be useful for women from diverse backgrounds aspiring to be senior leaders in the future.

Methods

This work was reviewed by Lehigh Valley Health Network's Institutional Review Board and deemed to be a quality improvement study. We selected a case study approach (Stake, 1995) as a framework in order to develop an in-depth understanding of the experience of the women leaders in our sample. We sought to identify the core elements and attributes of the leadership journey for women in medicine and academic medicine.

Semistructured depth interviews were used. The interview guide was developed collaboratively by members of the study team, which included a female doctoral-level anthropologist, two physicians (one male and one female), and two female master's degree-level executives. Thirteen questions were asked that included topics such as (a) the influence of race, ethnicity, and/or

Table 1. Respondent Demographics

| Name | Ethnicity | Physician | Medicine | Academic Medicine | Leadership Position |
|------|------------------|-----------|----------|-------------------|---------------------|
| 1 | Latina | MD | X | X | Yes |
| 2 | Asian | MD | X | X | Yes |
| 3 | African American | MD | | X | Yes |
| 4 | Latina | MD | X | X | Yes |
| 5 | African American | MD | X | X | Yes |
| 6 | Latina | MD | X | X | Yes |
| 7 | Caucasian | MD | X | X | Yes |
| 8 | Latina | Dr.Ph | | X | Yes |

gender on career success; (b) career opportunities and choices; (c) definition of leadership; (d) attributes of successful woman leaders; (e) work–life balance; (f) influence of organizational culture; (g) importance of mentorship and social networks; and (h) advice for up-and-coming women leaders. Purposeful sampling (Cresswell, 2003) was used to recruit respondents in senior leadership positions from medicine and academic medicine in the United States. In purposeful sampling, the investigator intentionally selects people to interview who have answers to the study questions.

Eight Caucasian, Latina, African American, and Asian women from medicine and academic medicine were interviewed. Respondents were contacted by e-mail or telephone, and those who agreed to participate were sent the interview questions by e-mail and asked whether telephone, in-person interview, or written response was preferred. Those preferring telephone or in-person interviews were sent a consent form for audio recording of the interview. Signed forms were faxed back to the interviewer prior to the scheduled interview. All interviews were conducted by a doctoral-level medical anthropologist. Most interviews were conducted by telephone, a few were in person, and several responded with written answers to the questions. Interviews were continued until saturation of information occurred and no new information was obtained from respondents.

At the beginning of each telephone interview, respondents were again asked for permission to record the interview, even though all had returned a signed consent.

Interview recordings were downloaded, transcribed, and placed in a secure folder on the project computer. Written responses and notes taken during the telephone interviews were transcribed and added to the project folder.

DATA ANALYSIS

NVivo 7 software (QSR, 2001) was used to aid in the organization and analysis of the data. Interviews were analyzed using an interpretive, iterative, inductive process (Cresswell, 2003). Themes were identified, and coding was applied to passages in each document by each team member individually (Cresswell, 2007; Stake, 1995). A second round of analysis enabled identification of patterns and relationships among themes. Group consensus was then obtained for themes, and linkages and relationships among themes were explored, resulting in an understanding of the experiences and core attributes of the interviewed women leaders.

Results

Table 1 describes the respondent characteristics. All respondents are in senior leadership positions in medicine or academic medicine. Results shed light on key issues identified by our respondents as important in understanding the experiences of being a woman in a leadership position in medicine and academic medicine. The topics included the definitions of leadership and attributes of women in leadership positions; the influence of

Table 2. Core Attributes of Women Leaders

1. Have core values and principles that you heed no matter what. Includes integrity, honesty, fairness, and objectivity.
2. Keep personal balance—balance between work and home life.
3. Are visionary and able to communicate that vision to others.
4. Can inspire others to follow.
5. Have drive and perseverance.
6. Lead by example; be hands on. Be willing to roll up sleeves and pitch in when necessary.
7. Have good communication skills and be a good listener.
8. Have self-awareness—check self/know how you are perceived by others.
9. Have courage—leadership courage—able to make informed, well-thought-out decisions/decisive.
10. Have mentors—have personal mentors and also mentor others.

organizational culture; factors related to race, ethnicity, and gender; family responsibilities and work–life balance; influence of mentors; factors related to career success; and advice for women aspiring to leadership in medicine or academic medicine.

LEADERSHIP DEFINITIONS AND ATTRIBUTES OF SUCCESSFUL WOMEN LEADERS

We asked our respondents to define leadership and what they thought were the core attributes necessary for success as a female leader. Table 2 summarizes these core attributes as identified by our respondents. All respondents defined leadership in similar ways. One respondent defined leadership in the following way: “I think leadership is the ability to influence, guide, and mentor people in ways that has [sic] a positive influence and outcomes on them and in turn, the organization, environment, and institution that they work in. It [leadership] requires tremendous integrity and the ability to balance life and work. In the end you are a role model to all those that you lead.” Core values and principles were unanimous attributes cited by respondents. Some of our respondents talked about leadership as positional and/or inspirational. Despite the fact that all respondents were in leadership positions with authority, several noted that “leaders” are not always in positions of authority yet may have the ability to motivate and inspire people. They felt that sometimes, inspirational people

are the real “leaders” who influence without a formal title.

Being a visionary was noted as key to leadership. Some respondents suggested that leadership is more than management; it is about influencing others to do their best and to want to follow your vision. Leading by example, they said, involves a willingness to roll up your sleeves and pitch in when necessary, including taking on tasks that others may not want to do. As one woman said, “A great leader is humble and is quick to not only deflect credit but also help people to achieve their collective goals.” One respondent stated that “having self-awareness of how you are perceived is incredibly important to be a successful leader.”

Excellent communication skill was cited as another key aspect of leadership. This includes being a skilled listener. Respondents all agreed that an effective leader has to be able to clearly communicate her vision and the steps necessary to achieve that vision. Emotional intelligence (EI) was also unanimously noted as a crucial component for leadership. EI was defined as having self-awareness of your emotions and those of the people you work with and harnessing this to achieve success. EI allows women leaders to make informed, well-thought-out decisions that take into account what others around them think.

Several respondents reported that relationship management is another important attribute of leaders. The successful leader needs to know how to “get along” with

not only the boss, but also with those below them in the chain of command. Some respondents said that their personal strength and emotional intelligence came from how they were raised. All respondents identified at least one female relative, usually a mother, who was strong emotionally and served as a role model for them as they grew up. These lessons on emotional strength helped them early in their professional careers in medicine and/or academic medicine. Finally, respondents noted that leaders must be able to make the tough decisions and must have leadership courage when needed.

ORGANIZATIONAL CULTURE OF MEDICINE AND ACADEMIC MEDICINE

All respondents work in either medicine or academic medicine. Some have worked in both settings, and shared their perspectives about differences in these settings. Regardless of the differences in the settings, all respondents indicated that women in leadership faced challenges in climbing the leadership ladder. For example, in the area of academic medicine, one respondent noted the difference in work culture and gender barriers between public versus private universities and hospitals. In academic medicine, this respondent said, "The higher you go, the more exceptional you must be as a woman. You are dealing in a man's world and you may be the only woman in the room." This same respondent said, "I stopped thinking about myself as a woman, because sometimes I feel that my point of view is marginalized." Respondents added that academic medical settings often had multiple demands with conflicting missions, are antiquated in their policies for women, and can be bureaucratic and complicated workplaces.

IMPACT OF GENDER, RACE, AND ETHNICITY ON LEADERSHIP ADVANCEMENT

One of our African American respondents stated, "I felt that I had been a victim of discrimination due to my gender, age, and race throughout my career." Several times during her career, she felt she had been denied an opportunity or promotion. Several respondents, including African American, Latinas, and Asians, said that using race or ethnicity as an "excuse" for lack of success in life or advancement to leadership positions was unacceptable to them. Respondents noted that life experiences

while growing up made them realize that even though they had to work harder or be twice as alert as their peers to get ahead, it was still very possible. Women in our sample were unanimous in the opinion that gender prompted them to work harder than their male counterparts in order to be prepared, prove themselves capable, and achieve career success.

Several respondents said they were beneficiaries of programs designed to provide opportunities to minorities. They appreciated the opportunities that allowed them to get a foothold in their education or careers, but said that these programs alone were not responsible for their eventual leadership success. These women reported that they still had to work very hard, gain the necessary and requisite skills and experience to prove their abilities, and did not expect preferential treatment once they were offered opportunities.

Respondents noted that women who aspire to leadership need to "be prepared and be patient." It is important for women leaders who have achieved success to help other up-and-coming women to succeed. To this end, respondents believed that it is important to promote and advocate for other women. Respondents agreed that gender, more than race or ethnicity, appeared to be the main "issue" in attaining leadership positions. This was especially true in male-dominated fields such as medicine and academic medicine. One respondent stated, "I understood early on that women not only needed a voice at the table but had something extraordinary to contribute that my male colleagues also wanted."

FAMILY RESPONSIBILITIES AND LIFE BALANCE

The perception that women leaders have difficulty balancing life and family responsibilities was cited as common among the male counterparts of our women leaders. When asked whether family responsibilities had influenced career choices, one respondent said the following: "This absolutely influenced my career. I have found that I had to juggle the priorities of being a mom at home and a wife with my own career and within my professional environment." Women leaders reported feeling that their male colleagues were looking over their shoulders to see how they managed to get children on the school bus in the morning and make the early

morning work meeting, not only on time, but prepared. As mothers and professional women, respondents said they had to learn to balance child and family issues with work requirements.

Family expectations and support at home played a role in the success of some of our respondents. In most cases, respondents reported that family or close friends provided emotional support. Seven of our eight respondents were mothers and had strong opinions about their roles as mothers and professionals. Many of the women we interviewed reported starting families or raising young children at the same time they started careers. These respondents said that taking time off for childbirth or child care was usually viewed as a career liability by their male counterparts because of the assumption that mothers as primary caretakers of children would not be able to balance both. Our respondents disagreed with the perception of children as a liability and generally viewed the ability to juggle family and work as both an asset and an example of their ability to manage multiple responsibilities.

While child and family issues might be viewed by employers as potential liabilities, respondents mentioned that families, particularly spouses, were important sources of encouragement and support during stressful work lives. Similarly, respondents reported that their male counterparts who were parents did not seem to be labeled with children as a liability as the females were. While several women reported that their careers were slowed down by pregnancy and parenthood, none reported regrets at having children.

MENTORSHIP AND SOCIAL NETWORKS

Women leaders need influential people in the organization who support them or are willing to give them the chance to prove themselves. Some of our respondents had influential leaders who mentored, supported, and advocated for them to get new opportunities and take on new challenges. Respondents agreed that being politically savvy is important and is something a mentor can help women leaders develop. It is essential to have a good understanding of the organization and its current leadership.

Many respondents said they had personal mentors at some point in their careers, even if they do not have a personal mentor at present. Some sought out mentors or

had a “circle of advisors,” while others had more of an informal mentor at various points along their professional development. Mentors were identified as parents, friends, clergy, professors, professional colleagues, or superiors. Key components of the mentor–mentee relationship, according to our respondents, included: development of a trusting relationship with the mentor, being willing to listen to positive and negative feedback from the mentor, viewing this person as a role model, and possessing the ability to keep discussions confidential.

All respondents who had mentors at some point in their careers agreed that the gender of the mentor was less important than the “match” of the mentor in terms of position or personality. In fact, one respondent stated, “I felt that having a male mentor was helpful, since it enabled me to learn how to negotiate the ‘boys club’ that existed in my division of the military.”

FACTORS RELATED TO LEADERSHIP SUCCESS AND ADVICE FOR WOMEN LEADERS

Education was an important component of the leadership journey for all respondents. All respondents are highly educated with advanced degrees and said their educational paths were important to development as leaders. Several respondents reported obtaining medical degrees later in life after first working in different careers or raising families, while others received advanced degrees in sequence at a younger age. All were motivated to get college educations and to be successful. They believed that women must have all the necessary competencies, and be skilled and capable at a baseline. Some respondents reported growing up in poor families, some the children of immigrants, and some whose first language was not English. Most reported growing up expecting to go to college and to support themselves through it. They attributed their success as women leaders in part to their family’s expectations of educational and career success.

Respondents were unanimous that early life and work experiences helped prepare them for the leadership roles they now hold. As an example, one of our respondents sold real estate prior to entering medical school and another was a physician in the armed forces prior to her current job in academic medicine. Both respondents used these experiences as positive factors that contributed to their leadership success. They said that working in these

Table 3. Advice for Women Aspiring to Leadership

1. Develop self-awareness and know your personal style.
2. Have a clear sense of purpose—know who you are and where you want to go.
3. Be patient—wait your turn.
4. Find a mentor.
5. Learn to navigate the system.
6. Learn to market yourself.
7. Read books about leadership/get leadership training.
8. Prioritize what you want (career and family) and understand the demands these can have on family responsibilities.

diverse fields gave them unique skills they could transfer to their leadership roles.

When asked what advice they would give to young women aspiring to leadership positions in medicine and academic medicine, respondents stated that it is sometimes difficult to see clearly where you are going or what lies ahead. However, the twists and turns in a professional career can add value to where you end up. Being patient, having a clear sense of purpose, and developing self-awareness with your own personal style were seen as important by all respondents.

Table 3 lists key topics of advice that the leaders in our study agreed upon as keys to success for aspiring women leaders. Several respondents reported that it is helpful to career success to volunteer for or take on tasks that others might not want to do in an effort to gain experience and prove ability. Using the system and mentors to then market one's abilities can be very useful and yet may not come naturally to women leaders. Also, it is important, our respondents said, for young women to get their priorities straight and understand the demands that careers and leadership can have on family responsibilities. Above all, respondents felt that women can have both families and careers, but they have to be willing to work hard to balance everything and be successful.

Discussion

The information presented in this study suggests that women's paths toward leadership in medicine and academic medicine are influenced by many factors, most of which are impacted by gender. Given that medicine and academic medicine continue to have men dominate

leadership positions, women in these fields aspiring to become leaders must be cognizant of what it will take to succeed. Having a clear understanding of the realities of work–life balance, the impact of organizational culture, and the critical attributes they will need as leaders will bode well for success.

The women interviewed in this study were highly successful individuals with the requisite qualifications to be in senior leadership positions in academic medicine and medicine. In order to understand the development of women as leaders in medicine and academic medicine, we must also understand the importance of gender in this paradigm. Gender appears to trump everything else as the key issue women leaders must learn to handle as they climb the leadership ladder in medicine and academic medicine. All of the women in our study felt they had to be smarter and work harder and for longer hours than their equal male counterparts to be recognized and/or advanced to leadership positions. Having a family and juggling the demands at home and work was a recurring theme. We found that it was most important how women leaders address and manage these challenges. Emotional intelligence, organizational intelligence, and relationship building were all seen as important strategies for success. Interestingly, respondents felt that their roles at home helped them hone the skills they later needed as leaders. Seeking support from families and working with mentors had a great impact on their success.

Limitations

Although we attempted to have a study sample that represented a cross-section in terms of race, ethnicity, and

geographic location, we did not have representation from woman leaders working or practicing on the West Coast of the United States. Our sample size was small and intentionally limited to medical professionals and women leaders in academic medicine and results may not be applicable across other disciplines. Our sample of eight respondents fits within the usual sample size parameters for case studies (Stake, 1995). Finally, we did not control for other stigmatizing characteristics in planning our interviews. Stigmatization for religious views, family or lack thereof, or sexual preference was not identified in our sampling. It is possible that these and perhaps other characteristics could have an equal or larger effect on the ability of women to advance in their careers.

Conclusions

It is expected that women will continue to pour into the American workforce and that their representation in leadership positions within medicine and academic medicine will become more prominent. This case study provides some insight into these fields and highlights, through the experiences of these eight women, what it will take to succeed.

Many medical and academic medical institutions across the country are trying to find ways to reduce barriers to advancement through policies, focused initiatives, allocation of resources, and leadership support if they expect to retain women and promote them into leadership positions. In an article by Powell et al. (2010), a call for a culture change has led to five medical school deans joining in a new coalition to address culture in a more comprehensive way than previously undertaken. As part of the project, they initiated a Learning Action Network to draw on each other's combined experiences to implement individualized change processes in each of the schools.

Recommendations from the Shalala committee and the NRC (2007) include a call to trustees, university presidents, and provosts to provide clear leadership in changing the culture and structure of their institutions to recruit, retain, and promote women, including minority women, into leadership positions. Studies support the theory that a critical mass of women is needed, especially at leadership levels to achieve gender equity and to effect organization change. Programs such as the Executive Leadership in Academic Medicine (ELAM)

Program for Women have had a positive impact on organizations and have been recognized as one external intervention that has been effective in increasing senior women faculty's leadership knowledge and skills and has advanced women participants (Dannels et al., 2009). Other programs that hold promise for change include the National Science Foundation's ADVANCE Institutional Transformational Awards to advance women in science, technology, engineering, and math (Ash, Carr, Goldstein, & Friedman, 2004; Rosser & Chamcau, 2006).

Women in medicine and academic medicine can also chart their own destinies with the right mind-set and skills, mentorship, and strategies to help their organizations recruit, promote, and retain them—an extremely valuable commodity to any organization in the 21st century. The most optimistic scenario is that women in leadership positions will soon form a critical mass that will allow them to make the very bold changes needed for advancement.

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Queens of the hill: Creative destruction and the emergence of executive leadership of women

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ABSTRACT

Despite penetrating the middle management ranks of many U.S. businesses, women continue to lag far behind men in their appointments to top leadership positions. Many explanations exist for why the glass ceiling exists, but few theories offer suggestions for how women *break through* this ceiling. In this paper we propose that the concept of 'creative destruction' can help us understand why some women ascend to leadership positions. Using empirical research and anecdotal evidence from the experiences of several high-profile female executives, we argue that women may rise to leadership positions in turbulent environments that are receptive to new talent and open to innovative, bold ideas. Further, we propose that under these conditions women may be seen as especially attractive candidates to guide organizations because they are perceived to utilize a leadership style that promotes openness and inclusion, and facilitates change.

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1. Introduction

Despite successfully penetrating the middle management ranks of many U.S. businesses, women continue to lag far behind men in their appointments to the senior management and executive ranks. Today, only eight women hold Fortune 500 CEO positions, less than 8% are Fortune 500 top earners, and only 14% hold board director positions.² The few women who have ascended into top management positions receive a great deal of publicity, appearing in the *Wall Street Journal's* "Women to Watch", *Fortune's* "50 Most Powerful Women," *Forbes'* "The Most Powerful Women in Business," and assorted other power rankings and lists. But, statistics suggest that these women remain the exception to the rule and that the glass ceiling persists. The accomplishments of these select women notwithstanding, women remain largely excluded from positions of power where they have the ability to influence organizational behavior and strategy (Burgess & Tharenou, 2002; Oakley, 2000).

An abundance of explanations exists for why the glass ceiling occurs, but few theories offer explanations for why some women *break through* this ceiling. Thus, we do not yet fully understand the individual and situational factors that facilitate the movement of women into executive positions. We argue that it may be possible to examine those women who have advanced to top posts to identify commonalities in their experiences and to explain theoretically why they have emerged as leaders. Specifically, we propose that the concept of 'creative destruction,' first formulated by Joseph Schumpeter (1942) to explain the role of entrepreneurship in a capitalist society can help us understand how women attain organizational leadership positions.

To develop this line of reasoning, we begin with a discussion regarding barriers to the advancement of women in management. Next, we explain the concept of "creative destruction" and provide several examples that illustrate how it operates at the

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² These statistics are available from Catalyst.org and have been taken from the Bureau of Labor Statistics' Current Population Survey in 2003.

organizational and industry levels of analysis. We then demonstrate how women have exploited the conditions of creative destruction to assume leadership positions. We discuss why this occurs, focusing on how perceptions regarding female leadership traits and gender characteristics may facilitate the appointment of women to executive posts under turbulent and uncertain conditions. We conclude with implications for practitioners and researchers.

1.1. *Climbing the executive ladder: The glass ceiling effect in corporate America*

Over the last 20 to 30 years, women have made steady progress in ascending the managerial ranks of Corporate America. In 1972, women held 17% of managerial positions in the U.S. By 2004, this number grew to 50%. However, women have been stymied in their move into top management positions (Oakley, 2000) and board memberships where organizational influence is likely to be greater (Hyland & Marcellino, 2002). For instance, in a study of 296 corporate leaders (128 men and 168 women), the research firm Catalyst (2005) noted that less than 2% of Fortune 500 and 1000 CEOs are women.

Management scholars attribute the failure of women to reach the executive suite to a number of causes. For example, social role theorists argue that men and women adopt stereotypical gender roles to be socially accepted (Eagly, 1987). Men are more likely to engage in behaviors that emphasize dominance, aggression, and achievement (Eagly & Carli, 2003). In contrast, women are more likely to display feminine behaviors that emphasize affiliation, nurturance, deference, and abasement, traits traditionally associated with supporter or “follower” roles (Rigg & Sparrow, 1994). Indeed, in the Catalyst study cited above, senior women executives consistently pointed to gender-based stereotyping as a top barrier to their advancement. A common perception among the male executives surveyed is that “women take care” while “men take charge.” Because the latter behaviors tend to be associated with effective leadership, high level positions are typically filled by men (Oakley, 2000).

Gender stereotyping also occurs with respect to work-family issues in ways that can impede the advancement of women. Although women constitute a growing majority of the workforce, they continue to perform most household and childcare functions (Hochschild, 1989, 1997). As such, women face scrutiny regarding their ability to balance work and family demands, to work longer hours and weekends, and to travel. Such scrutiny may be unwarranted because many female managers, much like their male counterparts, are “career-primary motivated” rather than “family-career motivated” (Burke & McKeen, 1993; Schwartz, 1989). However, even those women who are committed to their careers may be viewed as less committed if they take advantage of flexible work arrangements and work-family policies (Rogier & Padgett, 2004).

In addition to gender stereotyping, the management literature describes a variety of organization-level factors that may keep the glass ceiling in place. For example, organizational practices and social structures, ranging from internal labor markets to job segregation, can implicitly reserve top management jobs for men (Goodman, Fields, & Blum, 2003). Women may be passed over for job offers or promotions in favor of men because males, who are in a position to hire, are predisposed to hiring individuals similar to themselves. More specifically, organizations hire or promote based on the perceived “fit” of the candidate with existing top managers—most of whom are men (Morrison & Von Glinow, 1990; Powell, 1999). The phenomenon of homosocial reproduction also occurs among executive search firms that limit their search of CEO candidates to a select few of primarily male candidates who fit a traditional model of leadership and who served as CEOs in other companies (Khurana, 2002). This internal labor market is inefficient in securing the best appointments because the pool of candidates is artificially restricted and culturally defined by stereotypically male traits.

Structural constraints may also deny women advancement opportunities. In a study of 513 female and 501 male managers in Australian firms, Tharenou, Latimer, and Conroy (1994) found that women were given fewer opportunities than men for training and development opportunities that often led to advancement. Women may also suffer from the absence of female mentors and role models in higher level positions. Senior-level women could provide career support to enhance advancement opportunities (Jandeska & Kraimer, 2005; Morrison & Von Glinow, 1990) and also help shape decisions about promotions and other development opportunities (Ragins, Townsend & Mattia, 1998). The absence of female mentors both reflects the “pipeline” problem that exists for women and illustrates why women may continue to lack the leadership experience, skills, and opportunities needed to compete for top level positions. As Heilman (1997) notes, if the advancement of women merely was a matter of time (i.e., the relatively recent emergence of women into the workplace), more women would occupy executive positions than they currently do.³

Despite the many roadblocks that appear to exist, a number of women have reached top management positions, permitting researchers to examine factors associated with their success. For example, Goodman et al. (2003) studied 228 medium- to large-sized private companies in which women occupied more than half of the top management positions. The authors identified several industry and company characteristics associated with greater advancement for women. First, women were more likely to be in top management positions in companies with higher percentages of women in lower level management positions, lending credence to the “pipeline” argument noted earlier. Second, women were more likely to hold top posts in peripheral organizations where management salaries fell below the norm. The authors surmised that in core industries characterized by greater degrees of competition, companies tend to utilize pay-for-performance strategies to encourage innovation and productivity. Because executive compensation is often tied to the level of personal risk that management assumes (Beatty & Zajac, 1994), the higher the executive position, the more compensation risk the executive assumes via stock options and performance-related pay. The authors

³ We thank an anonymous reviewer for noting this distinction.

argued that because women tend to be more risk averse than men (Dwyer, Gilkeson, & List, 2002), they may be more attracted to peripheral organizations competing in stable, low risk industries that offer lower but less variable pay.

Goodman et al. (2003) also found that women were more likely to hold top management positions in companies or industries with higher rates of voluntary management turnover, a potential indicator of greater competition and mobility in the marketplace. The authors argued that if organizations are competing for talent and more willing to look externally for candidates, greater opportunities for women may emerge. Finally, Goodman and colleagues noted that women were more likely to be in top management positions in organizations in non-manufacturing, service-oriented industries. It is possible that women may advance in some service-oriented organizations because of a subtle bias toward “female” characteristics (Mohr & Henson, 1996). To the extent that women are perceived as being more nurturing toward customers and more attentive to consumer needs than are men, service-oriented organizations may deem it advantageous to place women in leadership positions.

The preceding findings advise that industry- and company-level dynamics may facilitate the emergence of women as leaders. In particular, women may benefit from working in competitive, high turnover environments and opportunities to gain task-relevant operational experience, particularly in non-manufacturing, customer-focused industries. These conditions, in many ways, parallel those specified in Schumpeter's concept of creative destruction that explains how organizations can unseat market leaders. In the section that follows, we describe the concept of creative destruction and then demonstrate, through specific examples of female executives, how creative destruction might explain advancement processes.

1.2. Creative destruction

In his classic, *Capitalism, Socialism and Democracy*, Joseph Schumpeter (1942) described a process he called “creative destruction” that emerged in capitalist market economies. Schumpeter rejected the model of a stable equilibrium among passive “price-takers” in all markets that neoclassical economics advances as a picture of capitalism. Instead, he insisted that capitalist economies are arenas of strategic interaction and persistent change. The most important characteristic of this dynamic is the succession of market leaders, whose temporary leadership is eventually destroyed by the creative actions of new challengers. Sometimes the incumbent leaders can counter challengers' threats by providing something new, in effect destroying their previous identity and reinventing themselves as a new enterprise. These actions perpetuate a cycle of continual creation and destruction of competencies and market leadership. Schumpeter (1942: 83) labels creative destruction the “essential fact of capitalism,” moving in a dynamic way to generate new markets, new consumer goods, new production methods, or new forms of industrial organization that advance the economy.

The theory of creative destruction was among the most important influences leading economists to focus on the nature of competition in real markets. The orthodox model of pure competition, inherited from Alfred Marshall in the early 20th century, requires a large number of competitors who are all price-takers—i.e. have no influence on prices. Thus, pure competition provides no scope for strategic interaction. But many markets are not perfectly competitive since there are only a limited number of competitors in which firms' market choices will influence one another. Such firms can stimulate demand by competing on price. Price competition may reduce revenue however, forcing firms to seek alternate means of increasing and/or protecting their market share through innovation, product differentiation, or the provision of product-substitutes and -complements. Schumpeter recognized that competition of this sort is invariably market-disruptive. This realization led to his conception of real markets as areas of creative destruction.

Since Schumpeter, several scholars have used the theory of creative destruction to explain how the modern day business world functions and how organizations compete strategically (e.g., Grimm & Smith, 1997; Kirzner, 1973). D'Aveni (1994), for example, explains how companies in hypercompetitive environments can disrupt their competition and gain market supremacy. Hypercompetitive environments, characterized by rapid change and disruption of the status quo, reflect Schumpeter's economic atmosphere of creative destruction almost ideally. In these environments, “winners” will be the organizations that can outmaneuver competitors by changing the nature of the value proposition—clients' or consumers' expectations about their own needs and how to fulfill them. Specifically, winners destroy an old competency of a competitor or, even more radically, destroy their own competency by introducing an entirely new product or service that anticipates new consumer expectations before a competitor steps in to do so. Examples of this hypercompetitive environment abound.

- Bic outmaneuvered Gillette by applying Bic's understanding of consumer preferences for cheap disposable items (e.g., the Bic pen) to a new product category. Consumers readily purchased a disposable razor rather than a permanent, injectable razor, which was the industry norm. Bic shifted the value proposition for customers to convenience, affordability and practicality over design.
- Microsoft continually disrupts its own software product by putting out new versions of its ever-popular Microsoft Office Suite.
- Apple's strategy of exploiting the attack on intellectual property violations by the music industry to introduce iTunes and the iPod to make purchases from it, before any of the other “players” in this industry could establish a revenue generating position within it.

The preceding examples demonstrate how competitors unseat incumbents (i.e., market leaders) by offering something new that consumers value more than what the incumbent offers or by destroying their own competence as a means of staying ahead of their competition. By constantly creating new innovations with improved versions of one product or new products that destroy older ones, companies stay ahead of their competitors, satisfy their customers, and improve their market presence.

In a comprehensive empirical assessment of the process of creative destruction, Smith, Ferrier, and Grimm (2001) studied more than 5000 competitive actions by firms competing in 41 industries over a 7-year period. The authors identified four ways in which organizations were able to win the battle for industry leadership and become “King of the Hill.” We summarize these actions in Table 1.

Table 1

Four phases of “competitive action” in Becoming King (or Queen) of the Hill

| Strategy | Lessons learned from industry | Women as emergent leaders |
|-------------------------------------|---|--|
| Be aggressive | Successful challengers carried out a greater number of new competitive actions | Successful women leaders seek out new opportunities in their careers and are willing to try new approaches |
| Use a complex repertoire of actions | Successful challengers used several different action types | Successful women develop a complex set of skills and leadership behaviors via their diverse career paths and life experiences. |
| Be unpredictable | Successful challengers were able to create “strategic surprise” | Successful women leaders break many traditional stereotypes regarding “female” leadership traits and demonstrate a willingness to take risks and make decisions that defy conventional wisdom. |
| Delay the leader's action | The longer the leader waits or is able to react, the longer the challenger was able to reap the benefits of pre-emptive new actions | Successful women leaders must outperform expectations to prevent undue criticism that would put their position and/or candidacy at risk. |

First, as the table indicates, Smith and his colleagues found that to ascend to a market leadership position, challenging firms (“challengers”) must be aggressive. The more active and aggressive the challenger acts in terms of the total number of new competitive actions carried out, the more likely it was to erode the leader's market share, primarily because the leader's activities were continually disrupted by the need to respond. Second, challengers must use a complex repertoire of actions. By using several different action types, challengers forced the leader to devise different methods of effectively reacting. Third, the challenger's actions must be unpredictable and create “strategic surprise.” Challengers were able to unseat incumbents by making random changes in strategy that were difficult to duplicate. Finally, challengers were more likely to maintain their new position of leadership when they were able to delay the leader's reaction. The longer the leader waited or was able to react, the longer the challenger was able to reap the benefits of pre-emptive, new action.

Collectively, these findings suggest that emergent firms must act differently than market leaders by offering something of value that is difficult to replicate or improve. Challengers must take risks, be flexible and willing to think outside the box, and be able to take advantage of uncertainty in the marketplace and an absence of effective, sustainable leadership at the top. In the next section, we examine whether the same processes may be used to explain the ascension of women into leadership positions. To this end, we discuss the shared experiences of several successful women in corporate leadership positions. We then describe how their experiences and the conditions associated with their rise to leadership mimic the processes outlined by Schumpeter and observed by Smith et al. (2001).

2. Creative destruction and the emergence of female leadership

We identified the women profiled in this section through a review of the popular business press from the years 2004 to 2006. Many of the women, for instance, received mention in one or more of the annual “power” lists and rankings published by the Wall Street Journal (“Women to Watch”), Fortune (“50 Most Powerful Women”), and Forbes (“The Most Powerful Women in Business”). Our search was not intended to be exhaustive, statistical or representative. Rather, we aimed to compare the experiences of a diverse set of women who have successfully broken through the glass ceiling and to explore the underlying themes of those experiences as they relate to the tenets of creative destruction. Accordingly, the women we highlight represent a select group of industries experiencing tremendous change and instability: financial services, consumer products, technology and media (Hymowitz, 2005).

2.1. Financial services

The financial services industry has experienced tremendous turmoil in the last few years due to a number of factors. First, competition within the industry ignited with the repeal of the Glass Seagull Act in 1999. The Act prohibited commercial banks from owning brokerages, selling mutual funds, or selling insurance products. The repeal of the act enabled banks, insurance companies, brokers, and independent financial advisors to offer the same products to the same customers. Second, the industry faces increased scrutiny from the SEC as consumers demand more transparent information on salesperson commissions, fees, and surrender charges from financial services firms. Finally, the industry has been rife with acquisitions and mergers, with many smaller firms being absorbed by larger entities.

Through these turbulent times, a number of women have emerged as corporate leaders, including Sallie Krawcheck, CFO and Head of Strategy for Citigroup. Known as “Ms. Clean” for her reputation for integrity and directness, Citi hired Krawcheck in 2002 to reestablish credibility and performance at the firm after a series of well-publicized government investigations (Rynecki, 2002). Krawcheck came to Citigroup from the independent stock-research firm Sanford C. Bernstein & Company where she served as CEO. In late 1998, Krawcheck served as director of research at Bernstein at a time when mutual fund and hedge fund managers wanted lucrative IPOs. Bernstein did not do underwriting, so many of its analysts were being recruited from larger, more prominent firms promising opportunities to earn millions more than they could in their present jobs. As market share eroded and defections increased, Bernstein was acquired by Alliance Capital, a growth-oriented money management firm. By 2000, Bernstein faced a

precarious future. Krawcheck then convinced senior executives to let her triple the size of the research staff, gambling that momentum in the industry would return to valuing thorough, objective research. The move, which Krawcheck later called “the bet of my career” (Rynecki, 2002: 40), paid off and led to her appointment to CEO of Bernstein in 2001.

Another example of female leadership from the financial services industry is Izumi Kobayashi, President of Merrill Lynch Japan Securities. When Kobayashi took charge of the subsidiary in December 2001, the brokerage firm was in disarray. After a failed attempt to break into Japan's retail stock brokerage business, the unit at Merrill was bleeding cash and posting losses of nearly \$550 million (Hymowitz, 2005). Since becoming both the first woman and the first Japanese native to run the Japan unit, Kobayashi exhibited a willingness to make tough decisions and an ability to identify and cultivate areas of growth to outpace the competition (Nakamura, 2005). Among her toughest decisions, Kobayashi opted to close most of Merrill's retail offices and slash staff by almost two-thirds. In the 4 years under her leadership, Merrill became the most profitable foreign brokerage firm in Japan (Hymowitz, 2005).

2.2. Consumer products

In the consumer product arena, disruption has been fueled by new technologies that enable organizations to gather vast amounts of information about customer preferences and buying patterns. Lower barriers to entry make the consumer products industry highly competitive as companies try to reduce costs and boost production efficiency. In many consumer goods areas, consumers have a myriad of similar products from which they can choose, which translates into low switching costs. The volatile nature of the industry is noted by Indra Nooyi, CEO of Pepsi Co., who states, “The minute you've developed a new business model it's extinct, because somebody is going to copy it.” (Levenson, Tkaczyk, & Yang, 2006).

A notable example of a successful woman executive from the consumer products industry is Anne Mulcahy, the first female CEO at Xerox. Mulcahy became CEO due in large part to her performance as its first female president and chief operating officer, a job she obtained in 2000 after a succession of men had failed (Kharif, 2003). At the time of her appointment to CEO, the company faced a massive accounting scandal that led to restatements of \$1.4 billion in earnings and a restructuring that reduced employment nearly in half (Hymowitz, 2005). A 27-year veteran of the firm, Mulcahy rejected the idea that Xerox lacked ingenuity and could not compete on innovation. In a bold move, she decided not to cut the R&D budget when cuts were being made across the board. By June of 2005, Xerox completed a 2-year new-product cycle in which the company redesigned 95% of its product lines. After years of decline, Xerox's “post-sale” revenue of inks and toners, the biggest source of profits in the printer industry, rose as customers made use of the company's new multifunction devices.

Andrea Jung, CEO of Avon Corporation, provides a second example from the consumer products industry. Jung first worked with Avon in 1993 when then-CEO Jim Preston planned to start selling Avon products in department stores and hired Jung to consult on the project. In her advisory role, Jung immediately saw what many Avon executives had not—an outdated product line. Jung's insights and uncompromising stance earned Preston's instant respect. He later conceded that the company was being run by “men in suits who don't really understand (the product) in the first place” (Setoodeh, 2005). When Jung became CEO in 1999, she gave the company an extreme makeover, pouring millions into R&D, pushing new lines of skin cream, expanding into overseas markets and developing flashy ads. The company updated many of its products and packaging and developed a new line of cosmetics designed for teens. Jung changed the image of Avon saleswomen from door to door, dowdy housewives to professional women who sold Avon cosmetics to their work colleagues while searching for new markets.

We next consider Ginger Graham, President and CEO of Amylin Pharmaceuticals. Graham served as a member of Amylin's Board at the time she took the reins of the biotechnology company in 2003. At that time, the company's fate “seemed as precarious as that of the threatened Gila monster” (Weintraub, 2006: 64). Amylin's share price had fallen to 31 cents and the company was nearly delisted from NASDAQ. The company's future rested heavily on the development and approval of the drug Symlin. However, gaining FDA approval for the drug stalled with repeated requests for additional clinical data. Given the uncertain future of Symlin, Graham gambled heavily on a second drug, Byetta, which early studies suggested could generate upwards of a billion dollars. In a move that shocked many inside and outside the firm, Graham moved all but 20 of the 350 employees working at Amylin over to the Byetta team. Two years later, the company acquired FDA approval for both products, signaling a promising future for the company. Analysts expect the company could turn profitable by 2008 and surpass \$1 billion in annual sales the following year (Weintraub, 2006).

2.3. Technology and media

The media business has also transformed in recent years due to the many choices consumers have for spending their leisure time. Network television, for example, dwindled as other forms of media arose, including cable stations, the Internet, satellite radio, Ipods, and cell phones that act as personal digital assistants (PDAs). The lines between types of companies continue to blur. For example, search engines such as Yahoo! form alliances with cell phone operators to put their content on mobile devices and Google and others vie for ownership of internet sites such as My Space and Face Book. Advertising also changed radically due to massive consolidation. Where there use to be many firms specializing in advertising, large firms now dominate the market. In 2005, five firms claimed two-thirds of all marketing dollars (Auletta, 2005). In the publication business, technology has been a significant disruptive force. Consumers enjoy free on-line content, forcing traditional publishing firms to change the way they operate. As book publishers consider partnerships with entertainment web portals, some search engines now to offer book samples on the web for a nominal fee.

PBS' Paula Kerger represents a handful of successful female leaders in the media industry. Kerger assumed the leadership of PBS at a time when it was struggling to remain independent among competing, powerful interests with political agendas and to persist

despite on-going financial struggles. PBS recently pushed back two attempts by Congress to cut its funds and the inspector general of the Corporation for Public Broadcasting forced its former chairman to step down for misappropriation of funds. Kerger is the first PBS president chosen from inside the public broadcasting field in more than 20 years. She boasts an impressive resume, particularly in the area of fund raising, having led the most lucrative fund raising campaign (\$79 million) in the history of public broadcasting for New York's WNET. Kerger's fundraising prowess distinguished her among finalists for the job. "She's got the energy, interest, patience and listening skills, if anybody is able to make it work," said Kent Steele, WNET executive director of broadcasting (Everhart, 2006).

CEO of eBay, Meg Whitman, provides a second example of female leadership in the media and technology industry. Whitman joined eBay in 1998 with a track record of successful corporate (re)innovations. For example, Whitman served as general manager of Hasbro Inc.'s Preschool Division where she oversaw global management and marketing of two of the world's best-known children's brands, Playskool and Mr. Potato Head. During her tenure, Whitman led the reorganization of the Preschool Division and its resulting return to profitability. In the mid-1990s, Whitman became President and CEO of Florists Transworld Delivery (FTD), the world's largest floral products company. While at FTD, she oversaw its transition from a florist-owned association to a for-profit, privately owned company. At eBay, Whitman recognized the changing business landscape offered by The Internet. She took the age-old idea of auctions and combined it with the power of the Internet and its ability to categorize information and bring many buyers and sellers together to offer a new value proposition to consumers. Over of period of 7 years, Whitman helped build eBay Inc. into a global e-commerce company.

Finally, we note Susan Whiting, the CEO of Nielson Media Research. Whiting took over the company in 2002 amidst scandal and an investigation by the Federal Trade Commission regarding whether the research firm was operating in the public interest. Nielson allegedly undercounted minorities in markets where it used new technologies to survey the impact of various television programs. Under her watch, Whiting took bold steps to offer data showing how TV viewers use the internet and to measure out-of-home viewing from bars, airports, college dormitories, cell phones, and Ipods. In an interview with *USA Today*, Whiting remarked that Nielson underwent more change in just 1 year than in the last 20—changes due to increased requirements in quality, new technologies, fragmented media, requirements for speed and pressures from clients because of reduced budgets (Lieberman, 2006).

While the career paths and experiences of these women are certainly divergent, it appears that each rose to the executive ranks while working in a turbulent environment that demanded a bold new approach to leadership. In creative destruction terms, we assert that each woman offered something new—be it acute knowledge of the customer or a strategic mindset that incumbents could not provide as leaders. Their experiences suggest that in turbulent, unstable environments women may have an opportunity to fill a leadership void just as challenger companies have found a way to provide products or services that secured market leadership. In the section that follows, we develop a series of testable propositions regarding the specific factors that might facilitate the emergence of women as leaders in turbulent times.

3. The female advantage in competitive, turbulent environments

The women we described likely represent a trend of talented women who have ascended to the top of their organizations in competitive industries subsequent to turbulence and sometimes scandal. In fact, of the 50 women profiled in *Fortune* magazine's 2006 edition of "The 50 Most Powerful Women," 20 work in consumer product companies, 13 in media, technology or advertising firms, and nine in financial services (Levenson et al., 2006). As the experience of the women profiled earlier alludes, women may be viewed as especially attractive candidates to lead organizations under turbulent, uncertain conditions because they bring a fresh approach to leadership, varying skill sets, and diverse life experiences. Thus, we offer the following baseline proposition:

Proposition 1. *Women are more likely to ascend to top management levels in competitive, turbulent industries than in stable industries that are less vulnerable to challenger entry.*

Our first proposition appears consistent with Goodman et al.'s (2003) findings that women were more likely to hold top positions in industries with higher rates of management turnover. However, Goodman and his colleagues limited their analysis to voluntary turnovers and speculated that turnover served as a proxy for competition in the market. Further, the authors found women in top positions in "peripheral" organizations that presumably are less risky. Our observations differ from this research in two ways. First, many of the organizations featured here are not peripheral, but core industries operating in high risk environments. Second, we assert that women rise to the top in industries with higher *involuntary*, as well as voluntary turnover. Specifically, involuntary turnover often occurs when boards of directors or other stakeholders determine that leadership changes are needed to regain competitiveness and to shift strategic focus. Because the leader represents the ultimate decision-maker and the person with absolute authority, external parties are likely to view leader succession as a signal about the institution's future (Beatty & Zajac, 1987). Thus, we offer this second proposition:

Proposition 2. *Women will be more likely to ascend to top management levels following the involuntary rather than voluntary termination of a male CEO.*

We further assert that opportunities emerge for women as a consequence of the process of creative destruction. In particular, turbulence and uncertainty may prompt organizations to expand their executive search and consider external candidates or non-

traditional internal candidates who offer something new, be it divergent experiences, goals, skill sets, or leadership traits. Two industry-level forces might stimulate changes in leadership and succession strategy (Giambatista, Rowe, & Riaz, 2005). First, as industries become more market- and customer-driven, attention tends to shift externally to resource competition and acquisition-based growth. As a result, leader succession becomes influenced more by the product market and the market for corporate control (Thornton & Ocasio, 1999). It follows that executive selection in turbulent, dynamic industries may be market-driven rather than internally- or “status quo” driven. Under these conditions, decisions about who will occupy leadership positions should be determined less by the type of individuals traditionally occupying these positions and more by the type of individuals who can deliver results that meet market demands.

A second trend that may affect this shift reflects the prevalence of accounting scandals and issues of corporate malfeasance in a variety of industries and the increased shareholder scrutiny of executive recruitment. While top-level positions were traditionally determined by word of mouth or based upon friendships or prior working relationships, selection has become more objective “out of the necessity of independence” (Pfaudenhauer, 2005: 29). Many firms now employ sophisticated, objective methods for recruiting top managers. Firms identify the specific skills and competencies required of leaders and engage third-party professionals to assist in the search. For firms or industries experiencing scrutiny and scandal, searching for non-traditional candidates should signal to stakeholders that change is in the air.

Together, these two trends regarding the search for leadership skill sets that match corporate strategy and market demands and the need for firms to signal change in the aftermath of scandal increase the probability that women may be considered among the potential pool of applicants. Therefore, we propose:

Proposition 3. *The rate at which women are appointed to top executive positions will be highest immediately following (a) a strategic shift towards customer- or market-orientation and (b) a crisis or scandal.*

It is also possible that opportunities for women to emerge as leaders in competitive and turbulent environments may arise, in part, because these environments require the types of leadership typically associated with female leaders (Rosener, 1990). In particular, some research suggests that the stereotypical qualities of female rather than male leaders work better in times of turbulence. For example, in a meta-analysis of emergent leadership and gender, Eagly and Karau (1991) found that *male* leadership was particularly likely in short-term, task-oriented groups that did not require complex social interaction. In contrast, *women* emerged as social leaders slightly more than did men. The authors interpreted these findings using gender role theory. Specifically, gender differences in leadership stem from the role-induced tendencies of men to specialize more in task-oriented behaviors and of women to specialize in relationship-oriented, socially facilitative behaviors. The latter behaviors may be especially effective in turbulent times because they encourage open communication, trust building, and collaboration (Bligh, Kohles, & Meindl, 2004; Hunt, Boal, & Dodge, 1999; Weber, 1947).

A number of researchers also have demonstrated the effectiveness of charismatic or transformational leadership during times of crisis and turbulence (e.g., Hunt et al., 1999; Mumford, Strange, & Bedell, 2006). Two types of charismatic leadership seem to be central to a leader's success: visionary and crisis responsive leadership (Hunt et al., 1999). Visionary leadership involves an ability to create an ideal future scenario for an organization and to effectively communicate this vision to followers. Crisis responsiveness concerns the leader's ability to effectively manage a crisis and instill confidence in his or her followers during periods of uncertainty and turbulence. Leaders often emerge during a crisis because the disruption, turbulence and general confusion caused by the crisis call for an individual who can define the situation and gain acceptance for a strategy to deal with the situation (Mumford, Scott, & Hunter, 2006). Empirical evidence regarding whether men or women are more likely to be charismatic or transformational leaders is mixed. While some studies have found no differences in the leadership styles of men and women (e.g., Van Engen, Van der Leeden, & Willemsen, 2001), others find that women tend to be rated as more transformational (e.g., Groves, 2005). In fact, in a recent meta-analysis of 45 studies, Eagly, Johannesen-Schmidt, and van-Engen (2003) found that women were rated higher on all transformational factors.

We believe that whether men or women actually demonstrate more transformational or charismatic leadership is irrelevant to our proposition. Instead, we argue that *perceptions* regarding the tendency for women to exhibit charismatic or transformational leader behaviors contribute to their advancement to executive positions. Indeed, a number of studies indicate that women are perceived by others, and perceive themselves, as using transformational leadership styles more than men (Bass, Avolio, & Atwater, 1996; Druskat, 1994; Rosener, 1990). It follows that when organizations are operating in turbulent times that require charismatic or transformational leaders, women may be perceived as superior candidates to men because of their expected leadership style. Thus, we offer the following proposition:

Proposition 4. *In an uncertain or turbulent business environment, women may be considered superior candidates for a top position because they are perceived by decision makers to be more charismatic or transformational leaders than male candidates.*

Ironically, the experiences of the women featured here suggest that some of the traits that handicapped the advancement of women in the past may be the very same traits responsible for their current and future success. Amidst scandal and growing public mistrust in corporate governance, leadership traits that now appear to be highly valued include greater transparency in communication with one's constituents, an open decision making style, and personal integrity (Pfaudenhauer, 2005). In the section that follows we develop specific propositions regarding several perceived traits of women that may make them more attractive candidates to lead in turbulent environments.

3.1. Communication skills

Women communicate and make decisions differently than men in ways that may be more compatible with the complexity and uncertainty inherent in turbulent environments (e.g., Tannen, 1995). For instance, an article from *US News and World Report* (Meyers, 2005) noted that, “Meg Whitman leads by not leading, bosses by not bossing, and manages by not managing.” The article went on to say:

“This highly fragmented and participatory business model requires a new kind of corporate leader, one who, like Whitman, keeps a steady hand on the tiller rather than gripping and pulling hard on the levers of power....That means subtly steering and influencing relationships—instead of controlling them—to generate financial returns. It means working from a cube, not a corner office, and conversing, not commanding. It means asking questions, as opposed to providing answers, and then sharing what's been learned. It means building continual consensus and earning trust through transparency.”

Communication skills and the ability to manage a diverse group of people are critical skills for leading in rapidly changing environments (Fiol, Harris, & House, 1999). Under these conditions, employees may feel vulnerable to lay-offs, morale may be low because individuals are asked to do more with fewer resources, and the ambiguity of job roles may leave employees feeling insecure. Leaders who communicate openly, demonstrate integrity and trust, and encourage participation should outperform those with a more traditional, command and control style of leadership. Research suggests that women tend to demonstrate the former (Helgesen, 1990; Van der Boon, 2003). For instance, Greenberg and Sweeney (2005) cite a study conducted by the consulting firm Caliper of 60 top women leaders from the US and the UK that found women leaders demonstrated a more inclusive, team building style than men. Specifically, women listened more, were more willing to share information, and were genuinely more interested in hearing others' points of view.

Women also use a range of communication styles that can be tailored to fit the context—from politeness, formality, and indirectness to informality and directness. Indeed, research demonstrates that many women enjoy highly developed discourse management skills that they employ in order to affect results (Holmes & Stubbe, 2003). For example, consider one reporter's observation of Sallie Krawcheck in action. “The new CEO is starting a two-day trip to four cities that will include five presentations, five private meetings with investors and two group dinners. At times empathetic, even flirtatious, Krawcheck exudes the sense that she is entirely absorbed in the conversation at hand. Bill Clinton would admire her campaign skills (even if her rhetoric sounds more John McCain)” (Rynecki, 2003: 41). Another notable female executive, Patricia Woertz of Archer Daniels Midland (ADM), spent her first 100 days as CEO meeting with 4000 employees and visiting 32 ADM locations. Her objective was to listen and learn and to find out what needed to be changed (Birger, 2006). Together, anecdotal evidence and empirical research suggest that women more than men may be perceived to possess the communication skills (e.g., facilitative, inclusive) needed to lead effectively in turbulent environments. Hence, we propose:

Proposition 5. *In an uncertain or turbulent business environment, women may be more likely to obtain a top management position because they are perceived by decision makers to possess more of the desired communication skills than men.*

3.2. Customer and service orientation

Consistent with businesses' need to be more market-focused in times of turbulence, women also may be perceived as more attuned to consumer preferences (Goodman et al., 2003). For instance, Anne Mulcahy at Xerox enjoys a reputation for being extremely focused on both internal and external customers. In fact, she attributes her success as a leader to her commitment to understanding and meeting customers' requirements (Kharif, 2003). As a more vivid example, Ginger Graham at Amylin, although not diabetic, pricks her finger daily for a blood-glucose test “just to get the feeling of it all” from the customer's vantage point (Weintraub, 2006: 64). The emphasis on customer needs and preferences is consistent with the claim that creative destruction occurs in the operational part of the business, where companies interact with customers and where new products are designed and manufactured. A deep knowledge of the customer and the product is essential to understanding how and when to make major changes to products or services, and how to destroy existing products, services, or even new markets to make way for new ones.

Women may also appear to be especially attractive candidates due to the escalating buying power of female consumers. According to a 2000 Federal Reserve Board study, women control 51% of U.S. personal wealth and own 43% of stock portfolios valued at over \$50,000 and 45% of investments in other markets (PBS, www.pbs.org/ttc/society/philanthropy). Consequently, women are being catered to by automobile dealerships, mutual fund companies, home improvement stores, and healthcare companies because these businesses understand that women make the majority of purchasing decisions for the family. With the demographic trend of women as significant wage earners and consumers, organizations may increasingly see the value of having women in senior positions to guide them in reaching these consumers.

Proposition 6. *In an uncertain or turbulent business environment, women may be considered superior candidates for a top position because they are perceived by decision makers to be more customer-focused or customer-savvy than male candidates.*

3.3. Self-sacrifice

A third trait often attributed to women's leadership that also may contribute to their advancement opportunities is self-sacrificing behavior. In particular, self-sacrificing occurs when a leader abandons or postpones his or her own personal preferences,

perks, or bonuses. The self-sacrificing behavior of an executive is especially important in turbulent business environments when rank and file employees may be asked to work longer hours and give up privileges. The willingness to self-sacrifice communicates a vision of cooperative enterprise which can motivate employees in times of chaos and demonstrate self-sacrifice. As Choi and Yoon (2005) note, followers tend to attribute charisma to leaders based upon their superior competence as leaders and on their self-sacrificing behavior.

A vast literature in social psychology suggests that women demonstrate self-sacrificing behaviors more often than men and also are *perceived* to be more self-sacrificing and “other-directed” than men. For instance, an experimental study by Eckel and Grossman (1998) found differences in how men and women allocate resources and in the degree to which they cooperate strategically. Specifically, women donated twice as much money to their anonymous partners when factors that might control cooperation were eliminated. A similar study examined gender differences in bargaining behavior and reciprocity (Croson & Buchan, 1999). During an experiment, the “proposer” was given a choice to send any or all of his or her \$10 to an anonymous partner. The experimenter then tripled the amount sent and asked the responder to choose how much to give back to the proposer. Women returned significantly more of their money to their anonymous partner than men did. Differences in self-sacrificing behaviors may be attributed to gender roles and socialization processes. Specifically, women may have different moral, ethical and psychological tendencies than men (Gilligan, 1982). Women emphasize care and relationships while men accentuate an ethic of justice focusing on universal principles and rules.

To the extent that women are perceived to exhibit self-sacrificing behaviors more often than men, their attractiveness as a potential leader during times of turbulence may grow. During cost cutting, down-sizing, or reorganizations, for example, corporate boards will want to signal to employees that their leader cares about the fate of employees and will be willing to sacrifice along with everyone else. This sense of self-sacrificing behavior may be even more important in times when the media is emphasizing run-away executive compensation and corporate malfeasance. Therefore, we propose:

Proposition 7. *In an uncertain or turbulent business environment, women may be considered superior candidates for a top position because they are perceived by decision makers to be more self-sacrificing than male candidates.*

3.4. Risk-taking propensity

Smith et al.'s analysis suggested that challenger companies act aggressively to unseat their competitors by engaging in a greater number of novel, competitive moves. Likewise, it appears that many successful women leaders act aggressively by seizing unique and challenging opportunities in their careers. Sally Krawcheck's risky move at Bernstein, Mulcahy's press for innovation at Xerox, and Whiting's reinvention of Nielsen demonstrate that these women also possess a willingness to take on risky assignments and make moves that challenge conventional wisdom. The women we profiled are not alone. For example, in an effort to boost her own marketability and advancement opportunities Diane Gulyas, the head of Dupont's performance materials division, volunteered to move into operations even though she had only sales and marketing experience (Levenson, 2006a,b).

The risk-taking behaviors of these women contradict conventional wisdom and empirical evidence that women are more risk averse than men (cf. Dwyer et al., 2002). However, there is emerging evidence that women leaders may be more likely to ignore rules and take risks than men (Greenberg & Sweeney, 2005). It is quite possible that their actions, while defying gender stereotype, do not reflect risk taking *per se* but the fact that women are not bound by conventional wisdom and/or are willing to take risks to get ahead. Indeed, a University of Michigan study of 302 successful businesswomen found that more than 90% of the women surveyed indicated that risk-taking was an important factor in their advancement (Michigan Women's Leadership Index, 2003). Similarly, Ragins et al. (1998) found that many women leaders attributed their own upward mobility to their willingness to take on risky assignments. These women seem to acknowledge that breaking through the glass ceiling requires taking significant risks in order to increase their visibility and status as leaders. Thus, in turbulent environments, perceptions regarding women's willingness and ability to take on risky assignments and to make bold, risky strategic decisions may facilitate their advancement into top level positions.

Proposition 8. *In an uncertain or turbulent business environment, women may be considered superior candidates for a top position because they are perceived by decision makers to be more risk-taking than men and/or more likely than men to take strategic risks.*

3.5. Diversity of experience

Smith et al. (2001) also noted that successful challengers use a complex repertoire of actions, employing several different strategies at the same time. We argue that successful women executives also employ a variety of complex behaviors and provide new approaches to leadership that make them particularly effective during turbulent and uncertain times. In particular, we believe that women may develop a more complex repertoire of leadership behaviors and skills through their more varied (i.e., less direct) career paths and divergent life experiences. Examples of these indirect career paths abound:

- Anne Mulcahy brought extensive experience in HR and Operations to the CEO position at Xerox;
- Paula Kerger at PBS developed a talent for fund raising after years in development functions with a number of well-known organizations;
- Merrill Lynch's Kobayashi began her career photocopying, fetching tea and doing other menial jobs as an “office lady” at a Japanese chemical company in 1981 (Nakamura, 2005);

- Irene Rosenfeld realized that in order to move up at Kraft she had to leave and prove her competence somewhere else. She joined Pepsi Co. to run Frito Lay before coming back to Kraft as CEO (Levenson et al., 2006);
- Ginger Graham, a former rodeo champion, started her career selling herbicides to soybean and cotton farmers in Arkansas; and,
- Indra Nooyi, CEO of Pepsi Co., was educated in India and the U.S., worked for Boston Consulting Group, Motorola, and Asea Brown Bowers before joining Pepsi (Sellers, 2006).

In addition to these diverse work experiences, many of these women are or have been working mothers, forced to balance work and family demands. We posit that these experiences, when viewed together, enable women to develop uniquely competitive skills that may be valued in a turbulent, uncertain environment.

Proposition 9. *In an uncertain or turbulent business environment, women may be considered superior candidates for a top position because they are perceived by decision makers to offer a more diverse set of work and life experiences than male candidates.*

4. Discussion

In this paper, we use the concept of creative destruction to provide a possible explanation for why some women are able to break through the glass ceiling and assume organizational leadership positions. Specifically, we argue that women's emergence as leaders is due to the interaction of perceived personality characteristics, leadership styles, and accumulated experiences with the demands of a turbulent business environment. This type of environment demands leaders who communicate openly, encourage collaborative decision-making, take risks, share burdens with subordinates, focus on the needs of internal and external customers, and demonstrate integrity. We argue that women may be viewed as especially attractive candidates during these times because they are perceived to exhibit these characteristics more often than men. Further, in turbulent environments, the lack of stability means that non-traditional, fresh ideas and approaches to leadership will be valued and outweigh gender-related biases.

Clearly, research is needed to empirically test our propositions regarding the advancement of women to executive positions in turbulent environments. However, measuring rates or degrees of creative destruction represents a significant challenge. Schumpeter himself made no attempt to provide an operational or quantitative indicator for the process, but he was also famously unsympathetic to quantitative approaches to social science (Schumpeter, 1948). Though we do not share Schumpeter's general views, we recognize the challenge in quantifying this concept and thus use the concept of “turbulence” to reflect conditions in which the process of creative destruction will emerge. Turbulence encompasses changes or events experienced by the organization that are nontrivial, rapid, and discontinuous (Cameron, Kim, & Whetten, 1987). Turbulence occurs in many forms, including restructuring, hostile takeovers, or rapid growth, that we list in Table 2 (Reilly, Brett, & Stroh, 1993). To assess the degree of turbulence researchers could use the examples in Table 2 to create an index that describes the extent to which turbulent events impact an organization or industry over a given period of time.

A second method for assessing the degree of turbulence would be to assess product life spans or rates of model changes (De Figueiredo & Kyle, 2006). Other measures could include the rate of patent applications and approvals, investments in research and development, and shifts in product or service demand. A third and final alternative would be to examine the industry stability and the rate of change using surveys of organizational representatives or industry experts. For instance, technology-turbulence could be assessed by asking organizational leaders to indicate the extent to which they agree with the statement, “The technology in our industry is changing rapidly,” or “It is very difficult to forecast where the technology in our industry will be in the next 2–3 years.” (Song, Droge, Hanvanich, & Calantone, 2005).

Table 2
Assessing the various forms of turbulence^a

| Type of turbulence | Definition |
|--|--|
| Reorganization of personnel or operations | Change in divisional structures, reporting relationships |
| Reductions in force | Layoffs, firings, downsizings, involuntary separations |
| Acquisition of new operations | Purchasing groups, divisions initiated by the company |
| Rapid growth | Growth in the size or operations: e.g., revenues, profits, employees |
| Voluntary terminations, early retirement | Employees offered incentives to voluntarily leave firm, retire early |
| Sale or spinoff of operations or assets | Divesting parts of divisions; selling assets |
| Merger | Combining the operations of two separate large divisions or companies; can be initiated by either company |
| Significant cutbacks in operations | Reductions in product lines, cutbacks in budgets, transferring employees to other areas |
| Acquired by another company | Being purchased by another operation |
| Recapitalization | Issuing more stock or bonds, buying back (treasury) stock; borrowing more money; renegotiating terms of debt |
| Attempted takeover, merger, or leveraged buy-out | A transaction that is started by another firm but not completed, possibly for reasons of lack of financing, antitrust issues, or companies simply changing their minds |
| Hostile takeover | An unfriendly acquisition or purchase of the target company initiated by another company without the support of the firm or division being acquired |
| Across-the-board pay or benefits cuts | Reductions in salary, bonuses, benefits, commissions |
| Leveraged buy-out | Purchasing a division using debt secured by the assets of the division being purchased |

^a Source: Reilly et al. (1993).

The rationale underlying several of our propositions is that women emerge as leaders in turbulent environments because they are perceived to have certain qualities or to exhibit certain leader behaviors. These perceptions can be measured through interviews with and/or surveys of organizational decision makers. Existing measures for many of the traits and behaviors we described are available, including self-sacrificing behaviors (van Knippenberg & van Knippenberg, 2005) and transformational leadership style (Bass & Avolio, 1994). A second approach would be to content analyze company materials (e.g., press releases) that announce the hiring or promotion of women into top positions. Support for our propositions would be found if the rationale for promoting or hiring women was attributed to the interpersonal or leadership characteristics (e.g., transformational leader behaviors, communication style, or diversity of experience) we described.

Testing our first three propositions also requires general measures of the change in women's representation in management in general and in the industries of interest here owing to their characterization as environments of creative destruction. Information regarding top management representation is publicly available through a number of sources, including Lexis Nexis and Compustat. The number of women assuming top management or C-level positions within and across industries could be tracked over a given time period. This method would provide both a static measure of the number of women executives at a given point of time but would also permit researchers to examine the rates at which women in a given industry—or as a whole—are appointed to top positions.

In lieu of a field study approach, researchers might also assess how perceptions of women as leaders influence promotion and hiring decisions by conducting a series of scenario-based experiments with executive education students or a sample of corporate recruiters. For instance, researchers could provide resumes and dossiers on two male and two female candidates for a CEO position. Based on the information provided in the materials, participants would have to select their choice for the position and provide an explanation for their choice. Alternatively, participants could be placed in decision making teams, asked to discuss the perceived strengths and weaknesses of each candidate, and then to select their top candidate. Responses to the written explanations or group discussions could then be content coded to determine why women were or were not appointed to the CEO position. Support for our propositions could be found, for example, if perceptions regarding women's communication or leadership styles or the need to “signal change” emerged as the key rationale for selecting a female candidate.

4.1. *Implications for practice and future research*

While our propositions have not yet been tested empirically, we recognize that the ideas developed here may provide some strategies that women should consider to increase their opportunities for advancement in turbulent business environments. We summarize these points in Table 1. Consistent with Smith et al.'s findings, the women we profiled and existing empirical data suggest that women need to be aggressive, unpredictable, and develop a complex set of skills and behaviors to ascend to leadership positions. These actions could include choosing an alternative or indirect career path, taking on new and challenging assignments, or making bold decisions in their mid-level careers to gain needed visibility. Further, given that transformational leaders tend to be effective in turbulent industries such as financial services, consumer products, and technology/media, women may be advised to develop those leadership skills. Perhaps more controversial, women may be encouraged to embrace rather than eschew the stereotype of women as socially facilitative, nurturing, and relationship-oriented leaders.

Beyond the testing the propositions developed here, we encourage researchers to explore a number of other topics relating to gender and leadership. In particular, as more firms expand from domestic to global enterprises with employees and customers from different parts of the world, future research should also investigate whether the ideas presented here apply across cultural contexts. For instance, given their highly developed discourse skills, women may well be better equipped to manage the international environment's enormous range of accepted communication norms. In Asian environments, for example, European women are often more effective than men as managers because they utilize intuition and empathy and are perceived to be loyal—qualities that are valued in this region (Van der Boon, 2003). Women expatriates from the United States assigned to other countries in Asia or the Middle East often report that they are judged based on their competencies and communication skills rather than their gender (Grove & Hallowell, 1995). In foreign environments such as Thailand, qualities such as patience, consensus building, sincerity, honesty, flexibility, and a willingness to learn are all required to get to the top (Van der Boon, 2003). These attributes, once again, are associated with female leadership. Research is needed to examine the extent to which the fit between these attributes and market requirements impacts the upward mobility of women working in these locations.

4.2. *Limitations*

While the ideas developed in this paper are exploratory in nature, there are some limitations to our study and propositions that should be noted. First, the method we used to identify the women profiled in the manuscript was neither rigorous nor theoretically-driven. We acknowledge that these women represent a small fraction of the women holding executive positions in Fortune 500 organizations and the even greater number of women executives in small- and mid-sized firms. To the extent that the experiences and characteristics of the women we profiled are truly idiosyncratic and not reflective of the broader female executive population, the strength of our propositions ultimately diminishes.

In addition to our sampling method, it is also important to note some limitations to the methods we provided for empirically testing our propositions. Given the numbers of women in executive positions, methods of assessment that require significant sample sizes may be problematic. For the foreseeable future the numbers of women in management generally and the numbers in businesses capitalizing on creative destruction may be too small to provide significant results, statistically or otherwise. Further,

our suggestions for empirically testing the propositions by assessing decision makers' perceptions may be problematic if steps to minimize cognitive biases (e.g., self-serving bias or hindsight bias) are not taken into account.

4.3. Conclusion

In conclusion, we note that women continue to make impressive gains in penetrating the management ranks of Corporate America. The experiences of the women we highlight in this paper and the myriad other women holding top posts in the US and around the globe further signify a bright future for women in business. However, statistics confirm that the glass ceiling persists for scores of other capable women. As globalization and the rate of change continues to increase, and as more women enter the workplace, it is vital that scholars and practitioners identify conditions that can facilitate their advancement. Once these propositions can be tested, we will be better equipped to advise women on the steps they can take to better their chances of advancement. We hope that future investigations regarding the applicability of creative destruction lend to these efforts.

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Considering business start-up in recession time

Business start-up
in recession time

The role of risk perception and economic context in shaping the entrepreneurial intent

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Abstract

Purpose – The purpose of this paper is to examine under-researched psychological and environmental factors related to entrepreneurial motivation and intention. This helps us to explore the links between risk perception (risk as opportunity and risk as threat), economic context (in a recession), entrepreneurial motivation (personal attitudes and perceived behavioral control) and intention for new venture creation.

Design/methodology/approach – A sample of 619 individuals from two European countries, Spain and Great Britain, is studied. A range of control variables have been considered, including demographics, human/social capital and country effects. Structural equation modeling is used to analyze the relationships among the model constructs.

Findings – The structural model broadly holds and adequately fits the data. Entrepreneurial risk perception is strongly linked with entrepreneurial motivation. Entrepreneurial motivation, in turn, is strongly linked with entrepreneurial intention. It suggests, therefore, an indirect effect of risk perception on intentions. Economic context is also linked with risk perception and entrepreneurial intentions.

Research limitations/implications – Results from this exploratory study suggest a role of risk perception in establishing the entrepreneurial intention of individuals. Therefore, greater attention should be paid to this element in entrepreneurship education programs. Similarly, perceptions about the economic (recessionary) environment and its relationship with risk perception also have to be taken into account, with the purpose of letting students understand the possibilities that are present in a recessionary situation.

Originality/value – This is the first time that perceptions about risk and the economic context are tested within the theory of planned behavior.

Keywords Entrepreneurial intention, Theory of planned behavior, Recession, Economic context, Entrepreneurial motivation, Entrepreneurial risk perception

Paper type Research paper

Introduction

In Europe and the rest of the World, there has been an increasing drive to enhance the number and sustainability of graduate entrepreneurs in order to assist with economic growth, innovation and prosperity (Henry *et al.*, 2003; ISBA Consortium, 2004; Liñán *et al.*, 2008). This agenda, at least in Europe, has been supported by the European Commission to create a more “entrepreneurial mindset” in terms of awakening and stimulating entrepreneurial cognition (e.g. motivation, intention) that underpin new venture creation (Liñán *et al.*, 2008). Despite years of research on the entrepreneurial



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process, our knowledge is still very limited, especially regarding the role of psychological factors and external environment. In the past, there have been debates regarding whether the focus should be on internal psychological variables (e.g. risk-taking, ambition) or external environment ones (e.g. macro-environmental conditions like favorable economic environment and financial support) (Taormina and Lao, 2007). Relatively few empirical studies have jointly examined both psychological factors and environmental context for their relative influence on new venture creation. Recently, researchers have highlighted the value in examining both of these types of factors to take into account the person and the context (Mitchell *et al.*, 2007; Taormina and Lao, 2007).

The main aim of this exploratory research is to focus on specific psychological and environmental context factors that have been under-researched, but are related to entrepreneurial motivation and intention in order to more deeply understand the process of new venture creation. The main variables in this research include the psychological variable of entrepreneurial risk perception (considering the upside and the downside), and the external environment (incorporating a recessionary economic climate). The relative importance of these variables for entrepreneurial intention is examined, in the context of theory and literature, especially the theory of planned behavior (TPB).

This paper hopes to make two main theoretical contributions to the literature. First, a model of entrepreneurial intention is proposed, which includes important psychological and environmental predictors (e.g. risk and recessionary economic environment) of entrepreneurial intention. This helps examine the relative importance of predictors as well as direct and indirect effects. As far as the authors are aware there is no such model of entrepreneurial intention, hence it contributes to existing knowledge.

Second, the focus of this research is not just the entrepreneurial intention, but also entrepreneurial motivation. In other words, it seeks to understand how some of the variables of interest (entrepreneurial risk perception) not only act as predictors of entrepreneurial intention, but also predictors of underlying motivational constructs. In particular, it focusses on the TPB's most important motivational constructs of personal attitude and perceived behavioral control. This allows a better understanding of the factors that are related to these important motivational variables.

This paper has implications for educators, decision makers and researchers as it will shed light on important psychological and environmental predictors of entrepreneurial motivation and intention. In other words, it will contribute to a better understanding of the relative importance of these factors and the "seed beds" or motivation to pursue an entrepreneurial career (Veciana *et al.*, 2005), and to understand what helps some individuals to start-up their own business, but not others. It will also allow for a test of a model that helps to explain entrepreneurial intention. This has implications for helping entrepreneurship education and training.

The paper is structured around the following four main sections: a literature review presenting a theoretical framework drawing on previous research to underpin the model and hypotheses; a methodology section to summarize the sample and measures employed; a results section reporting the findings from the structural equation model (SEM); and a final discussion section to reflect on and conclude the paper.

Theory and background

Entrepreneurial intention and the TPB

Entrepreneurial intention is a key element to understanding the process of new-firm creation (Bird, 1988). It has been defined as a conscious awareness and conviction by an individual that they intend to set up a new business venture and plan to do so in the

future (Bird, 1988; Thompson, 2009). The two key strands in entrepreneurial research have been based around the individual (e.g. personality, demographics, cognition), and the role of the external environment in business start-up. Within the former approach, it has generally been concurred that personality traits and demographics have not been very successful in explaining entrepreneurial intention or behavior (Krueger *et al.*, 2000). It has been advocated that cognitive models, in particular, the TPB approach, provides greater predictive capacity in explaining entrepreneurial intention and behavior (Autio *et al.*, 2001; Henry *et al.*, 2003; Krueger *et al.*, 2000; Moriano *et al.*, 2008). It has increasingly been considered a useful theoretical framework in new venture creation for two main reasons. First, it explains the intricate and complex cognitive processes leading to firm creation (Autio *et al.*, 2001; Krueger *et al.*, 2000; Liñán, 2008). The model is based on a person's behavior (in this case, new venture creation), which is considered to be directly affected by his/her intention. This in turn is based upon three motivational antecedents, that is: personal attitude (PA) as the extent of positive valuation about the start-up of a new venture; subjective norm (SN) as the social pressure and approval from significant others of becoming an entrepreneur; and perceived behavioral control (PBC), which is the perceived ease or difficulty of becoming an entrepreneur. PBC includes not only feelings of self-competence, but also perception of the controllability of the entrepreneurial behavior (Ajzen, 2002). A large body of entrepreneurship research provides empirical support for the TPB in the context of entrepreneurial intentions (Autio *et al.*, 2001; Kolvereid, 1996; Krueger *et al.*, 2000; Liñán and Chen, 2009; Tkachev and Kolvereid, 1999).

Second, and more importantly for this study, "since we are interested in *understanding* human behavior, not merely predicting it, we must try to identify determinants of behavioral intentions" (Ajzen, 1988, p. 166). In other words, for a better understanding of intentions it is important to explore people's entrepreneurial motivations (e.g. PA, SN, and PBC). In this research, we focus on PA and PBC, as they have been identified as the strongest motivational determinants of entrepreneurial intention (Ajzen, 1991; Fitzsimmons and Douglas, 2011; Liñán and Chen, 2009).

Ajzen (1988) posits that generally speaking only if people are positively attracted to the intended behavior and believe they have the resources and opportunities to perform a behavior (in this case, new venture creation) are they likely to form strong intentions to engage in that behavior. If they do not, then strong entrepreneurial intentions are very unlikely, even if they perceive favorable social approval. Thus, it is important to understand why people hold positive PA and PBC. The variables examined in this study are argued to act as important psychological and/or environmental predictors of PA, PBC and entrepreneurial intention. In Ajzen's (1988, 1991) work, they can be respectively implicated as behavioral and control beliefs facilitating (or obstructing) entrepreneurial intention and action.

Entrepreneurial risk perception

Entrepreneurial risk perception can be conceptualized as a decision-maker's assessment of the risk inherent in pursuing entrepreneurial behavior. This includes an individual's assessment of the expectancy and probabilistic estimates of the extent and controllability of risks, for example, in starting up a business and confidence in those estimates (Barbosa *et al.*, 2007a, b; Monsen and Urbig, 2009; Mullins and Forlani, 2005; Sitkin and Pablo, 1992). Scholars have recently suggested that entrepreneurs do not necessarily have a higher risk propensity (Brockhaus, 1980; Monsen and Urbig, 2009; Simon *et al.*, 2000). Rather, empirical research suggests a difference in risk

perception hypothesis in that entrepreneurs seem to perceive lower levels of risk associated with new venture creation (Barbosa *et al.*, 2007a; Monsen and Urbig, 2009). This occurs by wearing rose-colored lenses; that is, overestimating their chances of success and framing venture creation positively (Douglas, 2009; Monsen and Urbig, 2009; Palich and Bagby, 1995). Thus, these potential entrepreneurs focus on and perceive strengths and opportunities rather than weaknesses and threats. It is this psychology of risk or risk perception that predicts the individuals' entrepreneurial intention (Barbosa *et al.*, 2007b) and new venture creation (Palich and Bagby, 1995; Simon *et al.*, 2000), and is thus considered an important factor in understanding entrepreneurial cognition and behavior.

Moreover, entrepreneurial risk has been conceptualized as a multidimensional psychological construct comprising two elements: risk as opportunity (focussing on the upside of risk) and risk as threat (focussing on the downside of risk; Barbosa *et al.*, 2007b; Dickson and Giglierano, 1986; Mullins and Forlani, 2005). Risk as opportunity relates to the notion that the individual does not wish to miss an opportunity and associated potential gains, and thus may experience regret before making decisions to engage in entrepreneurial behavior. Conversely, risk as threat, relates to the notion of risk as a potential loss and focusses on the extent and uncertainty of these losses (Dickson and Giglierano, 1986; Mullins and Forlani, 2005; Venkataraman, 2002). The two elements of risk: risk as opportunity and risk as threat also correspond to the nautical analogy of "missing-the-boat-risk" (missing an opportunity) and "sinking-the-boat-risk" (failing in a business venture), respectively (Dickson and Giglierano, 1986). This dual conceptualization of risk is considered equally important in the psychology of the risk-taker because risk as opportunity (i.e. missing the boat and potential gains) can be just as much of a mistake as risk as threat (i.e. sinking the boat and potential losses), though the former has received less research attention. Both are relevant in understanding entrepreneurial cognition, and, importantly, potential entrepreneurs can be primed and learn to be either missing-the-boat risk-averse or sinking-the-boat risk-averse depending on their experiences (Dickson and Giglierano, 1986). Relatively few studies have examined both of these constructs in the context of the TPB's (entrepreneurial motivation) and intention.

Based on a synthesis of the literature (Barbosa *et al.*, 2007b; Luthje and Franke, 2003), our research model proposes a direct relationship between risk perception (risk as opportunity and risk as threat) and entrepreneurial intention as well as an indirect one. The direct link suggests that risk as opportunity tends to increase, while risk as threat tends to decrease, entrepreneurial intentions. This is because risk as opportunity (fear of missing-the-boat) can create a bias to act and thus enhance entrepreneurial intentions, whereas risk as threat (fear of sinking-the-boat) tends to create a bias to analysis and planning, generating uncertainty rather than action, and lowering entrepreneurial intentions (Barbosa *et al.*, 2007b; Dickson and Giglierano, 1986; Venkataraman, 2002).

Importantly, our model also suggests the risk-intention link is mediated by entrepreneurial motivation (e.g. the attitude about entrepreneurship and perceived behavioral control) through two suggested theoretical mechanisms. First, risk perception (risk as an opportunity or risk as a threat) can be linked to attitudes toward entrepreneurship. Kolvereid (1996) found that "security" and "avoiding responsibility" are motivational beliefs indicative of a lower entrepreneurial intention. These beliefs could reasonably be associated with risk as threat. Conversely, beliefs about "economic opportunities" and "challenge" are linked to higher intention and also to risk as opportunity. Similarly, a positive attitude to "independence" implies a preference for decision-making control and choosing one's own path to achieve personal objectives

(Douglas and Shepherd, 2000), and therefore may clearly be affected by risk perceptions. The subjective perception that entrepreneurial behavior will lead to potential gains (i.e. risk as an opportunity) or losses (i.e. risk as a threat) reflects salient beliefs about possible outcomes of entrepreneurial behavior. Thus, entrepreneurial risk perception should influence the attitude toward entrepreneurial behavior. In other words, the greater risk is seen as an opportunity, the higher the level of PA (positive valuation of entrepreneurship), whereas the greater risk is seen as a threat, the lower the level of PA (negative valuation of entrepreneurship). In turn, PA is expected to be positively linked to entrepreneurial intentions (Ajzen, 1988, 1991; Kolvereid, 1996; Krueger *et al.*, 2000, among others).

Second, risk perceptions can be directly linked to perceived self-efficacy and control (Macko and Tyszk, 2009). A more positive view of risk (risk as opportunity) may anticipate experiencing less debilitating anxiety about an entrepreneurial career, perceive a greater sense of control over outcomes, judge the likelihood of receiving positive rewards more highly, and thus possess higher self-efficacy (Zhao *et al.*, 2005). The opposite would be true with respect to risk as threat, since a negative perception of risk would lead to more anxiety, lower sense of control and lower sense of self-efficacy (Barbosa *et al.*, 2007b).

Thus, there are theoretical grounds to suggest that entrepreneurial risk perception is both directly linked with entrepreneurial intention and indirectly linked via entrepreneurial motivation (i.e. PA and PBC). In contrast, to the authors' knowledge, there has been a paucity of theory-driven empirical research that has jointly examined the links between risk perception, both PA and PBC, and intention. Thus, findings from this study would make an important contribution in this field. Based on the above discussion, the following direct (H1) and indirect (H2-H4) hypotheses are formulated:

- H1. (a) The greater risk is considered as an opportunity, the stronger the level of entrepreneurial intention; (b) The greater risk is considered as a threat, the weaker the entrepreneurial intention.
- H2. The greater risk is considered as an opportunity, the stronger the (a) PA and (b) PBC.
- H3. The greater risk is considered as a threat (i.e. fear of failure), the weaker the (a) PA and (b) PBC.
- H4. The more positive the: (a) PA and (b) PBC, the stronger the level of entrepreneurial intention.

Environmental economic context

While the previous sections have focussed on the psychological factors of risk perception and motivation, environmental factors can also clearly facilitate or hinder entrepreneurial activities because the individual makes an economic assessment of the expected costs and benefits of pursuing the entrepreneurial career path (Franke and Luthje, 2004; Luthje and Franke, 2003). One key determinant in this analysis is the environmental circumstances and in particular the economic context. There is a body of literature on a range of environmental factors in relation to entrepreneurial development, for example, contextual barriers and support factors in the environment, capital availability, aggregate economic indicators like socio-economic conditions and unemployment (Franke and Luthje, 2004; Gnyawali and Fogel, 1994; Luthje and Franke,

2003; Mazzarol *et al.*, 1999). Yet, there is a paucity of research looking specifically at a recessionary economic context in relation to entrepreneurial intention. The current economic crisis will clearly have an important impact on entrepreneurial intention and behavior because it can influence the psychology (e.g. perceived fear and opportunities) of starting up a business (Bosma *et al.*, 2008).

A potential entrepreneur's valuation of environmental conditions could profoundly, positively or negatively, shape his or her intention to create a new venture and pursue the entrepreneurial career path (Choo and Wong, 2006; Gnyawali and Fogel, 1994; Taormina and Lao, 2007). Rather than look at objective macro-level data (political, financial, economic) that often takes years to acquire (Taormina and Lao, 2007), environmental effects can be assessed in the form of an individual's perceptions, rather than objective reality *per se*. Moreover, it is the former that has been suggested as more powerful in explaining the decision to start a venture (Krueger and Brazeal, 1994; Simon *et al.*, 2000). According to classical economic theory, these perceptions of the business environment can be based on negative considerations that economic recession is unfavorable to becoming an entrepreneur because of a range of barriers compared to times of economic prosperity. For example, less availability of finance or financial difficulties, lower customer demand and lower expected returns (Bosma *et al.*, 2008; Stangler, 2009). On the other hand, the literature also suggests a recession situation may be framed as a fertile ground for new opportunities (a positive-pull effect) and/or considered as the best option in the absence of jobs and high graduate unemployment (a recession-push or so-called "refugee" effect) (Bosma *et al.*, 2008; Nabi *et al.*, 2013; Stangler, 2009; Thurik *et al.*, 2008).

In the former case, individuals may not start a business because the economic context is considered unfavorable, regardless of holding a positive attitude about entrepreneurship and considering risk as opportunity. Conversely, individuals might be willing to start a business, despite holding a negative attitude about entrepreneurship and considering risk as threat, because the economic conditions are considered favorable. Thus, a recessionary economic context can be considered to incorporate affect toward this context (positive or negative feelings) and whether or not it is considered as favorable (acting as a trigger and increasing entrepreneurial intention) or unfavorable (acting as a barrier and decreasing entrepreneurial intention). This is consistent with the view that environmental context, in this case a recessionary one, is directly related to entrepreneurial intention (Liñán *et al.*, 2013; Luthje and Franke, 2003; Nabi *et al.*, 2013) and activity (Bosma *et al.*, 2008; Stangler, 2009). On this basis, it is hypothesized:

- H5. The more a recessionary economic environment is considered favorable to starting up a business, the higher the entrepreneurial intention.

Entrepreneurial risk perception can also be linked to the way in which a recessionary economic context is appraised. The individual's mental model of reality will depend on their cognitive schemata (cognitive mechanisms that categorize incoming information) and if they "frame" the context as an opportunity/gain or threat/loss (Krueger 2000, 2003; Roszkowski and Davey, 2010; Sitkin and Pablo, 1992). Moreover, individuals holding a risk-as-opportunity schemata (focussing on the upside of entrepreneurial risk and potential gains) are also likely to feel positive about a recessionary economic context and view it in a favorable light (e.g. as a favorable opportunity to start-up). Perceiving risk as an opportunity relates to emphasizing the potential gains that may derive from acting in an uncertain environment, such as creating a firm (Barbosa *et al.*, 2007b;

Dickson and Giglierano, 1986; Mullins and Forlani, 2005; Venkataraman, 2002). Further, research suggests that a recessionary context can afford new opportunities, with some companies folding or becoming weaker and a larger pool of potential employees available (Stangler, 2009). Therefore, it is expected that people with a risk-as-opportunity schemata will also tend to frame a recessionary context more favorably as a start-up opportunity. In other words, the focus is on opportunity/gain. In contrast, holding a risk-as-a-threat schemata (the downside of risk and potential losses) would also lead individual's to see recession in a negative way (a threatening context). This is also consistent with Kahneman and Tversky's Prospect Theory which suggests that there are cognitive biases that influence people's choices (and hence perceptions) under risky conditions (see Boholm, 1998; Ricciardi, 2004; Roszkowski and Davey, 2010).

Nonetheless, the relationship between risk perception and the recessionary economic climate may change. In other words, risk perceptions may change as recessionary economic circumstances change. New information about the chances of successful venture creation (e.g. the severity of the recession) may cause individuals who viewed recession positively to view it in a negative sense and also change their risk perception schemata from risk as an opportunity to risk as a threat. That is, it is too risky to start-up and recession is now a negative context for venture creation. Inversely, if there is new positive information during a recession (e.g. economic recovery or upturn), this new information may cause individuals who viewed recession negatively to view it in a positive sense and also change their risk perception schemata from risk as a threat to risk as an opportunity. Recent research evidence on entrepreneurial cognition supports this notion that changes of information about a new venture influences individuals' risk perception and their view of the recessionary context (Barbosa and Fayolle, 2007; Roszkowski and Davey, 2010). Moreover, Roszkowski and Davey (2010) highlight there is a mutual interdependence. That is, positive risk perception is related to a positive view of the economic recession (and vice versa), while negative risk perception is related to a negative view of the economic recession (and vice versa). A co-variance relationship is therefore hypothesized[1]:

- H6.* There will be: (a) a positive relationship between risk as an opportunity and considering the recessionary economic environment as favorable to starting up a business; (b) a negative relationship between risk as a threat and considering the recessionary economic environment as favorable to starting up a business.

The model to be tested in the empirical analysis is summarized in Figure 1. This incorporates all the hypotheses of our entrepreneurial intention model.

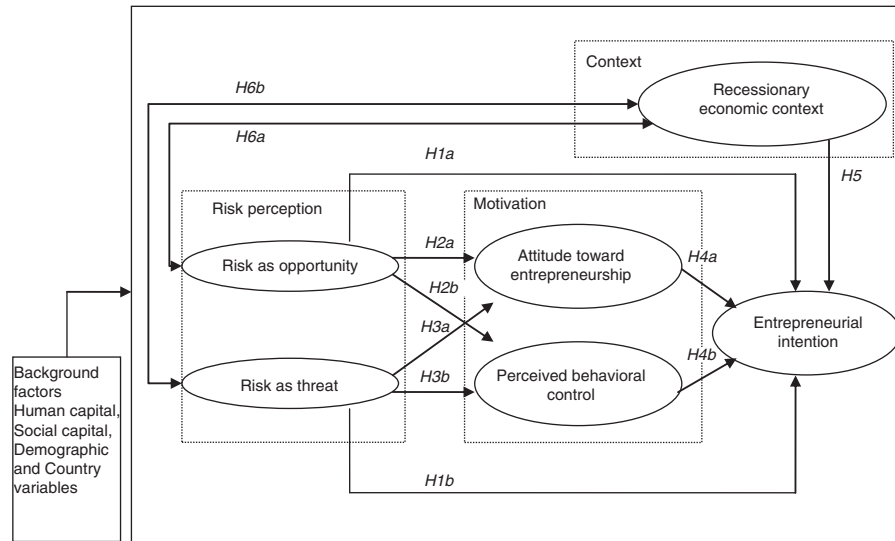
Method

Sample

Data were collected from a sample of university business students. This was considered appropriate for this research. Previous research has noted that business students "often see the founding of a company as an attractive alternative to wage or salary employment" (Luthje and Franke, 2003, p. 136). This is seen to stem from the decline in jobs in large organizations and job security, and the increasing desirability of self-employment and related values like autonomy, wanting to be one's own boss and challenge (Kolvereid, 1996; Luthje and Franke, 2003; Nabi *et al.*, 2006).

The original sample comprised 780 European (i.e. British and Spanish) respondents. However, this was reduced to 619 respondents with complete data sets due to missing data.

Figure 1.
Structural entrepreneurial
intention model



Questionnaires were administered to all attending students in several business-related classes, with previous authorization from the lecturer, and they were invited to complete them. A high response rate was obtained (99 percent), comprising respondents engaging in business-related courses (e.g. business studies, business management). The two universities are both located in medium to large urban areas, have a comparable size (number of students) and are representative of HEIs in each country in aspects such as average student age, percentage of students in undergraduate courses and so forth[2].

The British sample consisted of 407 responses collected from business school undergraduates at one large university in the North of England. Of these respondents, 56 percent were male and 44 percent were female, with an average age of 21.2 years. The Spanish sample included 373 responses, coming from one large university in the South of the country. Of these respondents, 37 percent were male and 63 percent were female, with an average age of 20.7 years. Both British and Spanish samples correspond with the general characteristics of students at the respective universities.

The two European countries were selected because they have many similarities. Both countries were still officially in recession at the time of this research (2009-2010), and they have been particularly affected in terms of GDP growth (both countries with figures still below -3.0 percent in the fourth quarter of 2009), according to Eurostat (2010). Apart from this, both countries have several similarities. According to the latest Eurostat data, both are considered high-income countries (total GDP for the UK and Spain at €1,818.9 billion and €1,088.5 billion, respectively, in 2008, with PPP-adjusted GDP per capita at €29,100 and €25,700, respectively). Both countries also have similar levels of nascent entrepreneurial activity[3] of around 3 percent, and early-stage entrepreneurial activity[4] of around 5.9-7 percent, as well as similar levels of knowledge and skills (Bosma *et al.*, 2008). Previous trends in both countries have also been similar in terms of a positive economic situation and declining unemployment generally since the mid-1990s. Since the two countries have many similarities, we considered them as one European sample. However, to take into account the possibility of country effects and the role of other background factors in

this research (discussed in the next section), a country-dummy is included as a control variable in the empirical analysis.

Measures

The relevant items in the research instrument used in this study are included as Appendix. Seven-point Likert-type scales were used to measure the key constructs in the model.

TPB constructs. This research uses the same measures employed in Liñán and Chen (2009) to assess three central constructs of the TPB in the context of entrepreneurship: personal attitude toward entrepreneurship, perceived behavioral control and entrepreneurial intention. PA was measured using items concerning the valuation about the start-up of a new venture. Perceived behavioral control (PBC) focussed on items pertaining to the capacity of becoming an entrepreneur (perceived ease or difficulty, how much control they have over its successful performance). Entrepreneurial intention was assessed using items measuring intentionality (i.e. a serious conviction and determination) toward new venture creation (Thompson, 2009).

Entrepreneurial risk perception. This construct was assessed using a multidimensional scale measuring the evaluation of risk as opportunity and risk as threat (Barbosa *et al.*, 2007b). Risk as opportunity focussed on business start-up as an opportunity and a positive action, whereas risk as threat focussed on start-up as a threat and a negative action (with a high level of riskiness and uncertainty).

Recessionary economic context. After reviewing the literature, this construct was assessed using items measuring the extent to which the recessionary economic context was viewed in general with positive affect and valued as a favorable contextual opportunity for starting up a business rather than as an unfavorable and negative context (Bosma *et al.*, 2008; Luthje and Franke, 2003; Stangler, 2009).

Background/control variables. Based on a synthesis of the literature (Autio *et al.*, 2001; Kolvereid, 1996; Liñán and Chen, 2009), a range of control variables (demographic, human and social capital) were also measured as background factors in this research. The coding of these background/control variables is as follows. Demographics include age and gender (0 = female, 1 = male). Human capital includes labor market experience (0 = no, 1 = yes), and self-employment experience (0 = no, 1 = yes). Social capital includes personally knowing an entrepreneur (0 = no, 1 = yes). Country effects were captured by coding each country (0 = UK, 1 = Spain). This was included as a control variable because research suggests that entrepreneurial start-up behavior (and thus intention) is embedded in specific national environments reflecting level of economic development, and socio-cultural and institutional conditions (Arenius and Minniti, 2005). The use of country as a control variable will thus allow identification of any potential aggregate effects.

Table I summarizes the characteristics of the sample and compares country differences. As may be seen, some of these differences are significant, justifying their inclusion as control variables in the analysis.

Data analysis

The empirical analysis has been performed using the SPSS (version 17) statistical package for statistics. In particular, since the recessionary economic context scale had not been validated before, an exploratory factor analysis has been performed to assess its psychometric properties.

The SEM has been tested with AMOS 17.0. To assess overall model adequacy, possibly the first and simplest way is considering the χ^2/df ratio which should be < 3.0

Table I.
Sample characteristics

| | Mean value | | <i>t</i> -test for equality of means ^a | | |
|------------------------------|------------|-------|---|---------|---------------------------|
| | UK | Spain | <i>t</i> | df | Significance (two-tailed) |
| Age (years) | 21.21 | 20.67 | 2.911 | 636.541 | 0.004 |
| Gender | 0.561 | 0.365 | 5.513 | 750.173 | 0.000 |
| Employment experience | 0.869 | 0.445 | 13.710 | 646.145 | 0.000 |
| Ever self-employed/SME owner | 0.117 | 0.049 | 3.439 | 691.590 | 0.001 |
| Know entrepreneur | 0.549 | 0.563 | -0.382 | 757.000 | 0.702 |

Notes: ^aLevene's test for equality of variances was performed and the relevant result is presented

(Kline, 1998), although this measure is controversial (Byrne, 2009). More generally accepted goodness-of-fit indexes (GFI) include RMSEA, CFI and GFI. In terms of acceptance level, Browne and Cudeck (1993) suggest a value of about 0.08 or less for the RMSEA would indicate a reasonable error, while a value of up to 0.05 would indicate a close fit. Other widely used fit indexes are the GFI and the comparative fit index (CFI), for which the threshold value of 0.90 is usually taken (Byrne, 2009). Akaike Information Criterion (AIC) may be used to assess competing models, since it takes into account model complexity (Byrne, 2009). Thus, a lower AIC value indicates a better fit compared with the competing models.

The data set was checked for the existence of common-method variance bias. Harman's one factor test was used for this purpose. To minimize this bias, data collection was performed: guaranteeing each respondent anonymity and confidentiality from third parties; assuring them that there were no right or wrong answers; and measuring the dependent constructs (i.e. entrepreneurial intention, PA and PBC) with some distracter items in between them and prior to the independent constructs (e.g. risk perception, environmental context), as suggested by the literature (Chang *et al.*, 2010).

Results

As a validation test for the newly developed scale, the nine items in the recessionary economic context dimension were factor-analyzed and two factors emerged. The majority of items (I1, I2, I5, I7 and I8) had the highest loading on the first factor. Therefore, these five items were selected to be used in the structural model. To check for the presence of common-method variance, Harman's one factor test was performed including all indicators in an exploratory factor analysis. Only 27.9 percent of the variance on the 30 indicators included was explained by the first factor. This is, therefore, taken as evidence that common-method bias is not a serious problem in this data set.

The model presented in Figure 1 was tested on the full 619-individual sample using structural equation modeling, and including the depurated recessionary economic context scale. An analysis of fit statistics for this Model 1, offered mixed results (RMSEA = 0.06; CFI = 0.87; GFI = 0.86; $\chi^2 = 1,380.46$; df = 393; $\chi^2/\text{df} = 3.51$; AIC = 1,524.46). Although RMSEA statistic indicates a good fit, other statistics suggest there is room for improvement.

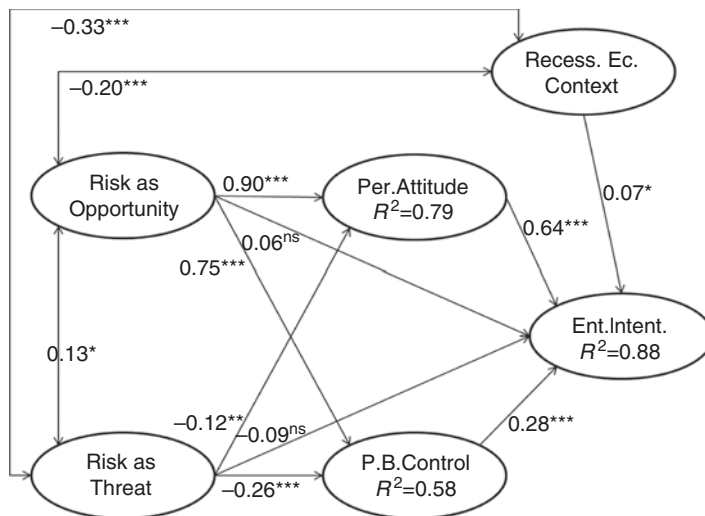
A careful look at the results pointed to the existence of highly correlated error terms in some of the observed variables. In this respect, and to ensure the unidimensionality of measurement (Anderson and Gerbing, 1988; Bordia *et al.*, 2004) the following items were removed from each of the scales: risk as threat (D2), recessionary economic context (I7R); personal attitude (A12R), perceived behavioral control (A5R and A16R)

and entrepreneurial intention scale (A9R and A17). This second specification was tested (Model 2) with satisfactory results (RMSEA = 0.04; CFI = 0.95; GFI = 0.94; $\chi^2 = 478.26$; $df = 218$; $\chi^2/df = 2.19$; AIC = 594.26). Figure 2 reports results from this Model 2, with indication of standardized regression weights and variance explained (squared multiple correlations). Table II presents descriptive statistics for the indicators used in each construct.

Based on this Model 2, initial reliability statistics are satisfactory, since Cronbach's α and composite reliability values range from 0.73 to 0.86, as shown in Table II (Nunnally, 1978). Following recent practice (Wincent and Ortqvist, 2009), discriminant validity is supported (Anderson and Gerbing, 1988) when the average variance extracted (AVE) from indicators in the same construct (Table II) is greater than the shared variance between each pair of indicators. This condition is met in this case. Additionally, since all the correlations in Table III are low or moderate, we find no evidence of multicollinearity.

The specification in Model 2 was tested on each national sub-sample independently (see Figure 3), with good fit indexes (RMSEA = 0.03; CFI = 0.95; GFI = 0.91; $\chi^2 = 706.27$; $df = 436$; $\chi^2/df = 1.62$; AIC = 938.27). As may be seen, the results are similar regarding path values and significance levels. The most notable difference relates to the negative relationship between risk as threat and PA, which is not significant in the Spanish sub-sample.

Based on these results, *H1* is not supported, since both the relationship between risk as opportunity and risk as threat with entrepreneurial intention are non-significant. Conversely, all other hypotheses are supported. In particular, the relationship between risk perception and intention is clearly an indirect one, through its motivational antecedents (personal attitude and perceived behavioral control, as *H2* and *H3* stated). Seeing risk as an opportunity has a very sizeable positive effect on perceived attitude and behavioral control (0.90 and 0.75, respectively). On the other hand, when risk is perceived as a threat, the opposite relationships hold, although the effects are smaller



Notes: ns, not significant; standardized coefficients; Significance levels of path coefficients: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Figure 2.
Results of Model 2

| Scale | Indicator | Loading | CR ^a | Cronbach's α | AVE ^a |
|-------------------------------|-----------|---------|-----------------|---------------------|------------------|
| Risk as opportunity | D3 | 5.292 | 0.732 | 0.715 | 0.479 |
| | D5 | 4.606 | | | |
| | D7 | 5.498 | | | |
| Risk as threat | D1 | 5.561 | 0.752 | 0.744 | 0.436 |
| | D4 | 4.653 | | | |
| | D6 | 5.291 | | | |
| Recessionary economic context | D8 | 5.420 | 0.762 | 0.757 | 0.448 |
| | I1 | 3.133 | | | |
| | I2R | 3.352 | | | |
| Personal attitude | I5R | 2.971 | 0.788 | 0.778 | 0.484 |
| | I8R | 3.225 | | | |
| | A2R | 5.604 | | | |
| Perceived behavioral control | A10 | 5.906 | 0.733 | 0.730 | 0.410 |
| | A15 | 5.625 | | | |
| | A18 | 4.961 | | | |
| Entrepreneurial intention | A1 | 4.087 | 0.856 | 0.853 | 0.603 |
| | A7 | 4.585 | | | |
| | A14 | 4.656 | | | |
| | A20 | 3.630 | 0.856 | 0.853 | 0.603 |
| | A4 | 4.205 | | | |
| | A6 | 4.729 | | | |
| | A13 | 4.685 | 0.856 | 0.853 | 0.603 |
| | A19R | 5.065 | | | |

Table II.
Descriptive and
reliability statistics

Notes: R, reverse scored; ^aCR, composite reliability; AVE, average variance extracted from the indicators in each construct; $n = 619$ in all cases

(−0.12 on personal attitude, and −0.26 on behavioral control), and not significant (for the former) in the case of the Spanish sub-sample.

H4 related to well-established effects (PA and PBC on intention), which have been confirmed here, as expected (0.64 and 0.28 path coefficients, respectively, for the joint sample). With respect to *H5*, the relationship between perceptions about the recessionary environment and intention is positive and significant (0.07). That is, the more recession is seen favorably, the higher the entrepreneurial intention, although is not significant for each sub-sample separately. Overall, the model explains 88.3 percent of the variance in entrepreneurial intention based on PA, PBC and recessionary environment. Besides, it also explains 78.8 and 58.0 percent of the variance in motivational constructs (PA and PBC, respectively), based on risk perceptions, which is notably high.

H6 also holds. Significant relationships were found between risk perception and recessionary environment. Seeing risk more as an opportunity (a covariance of 0.20) was positively related to, and seeing risk as a threat (−0.33) was negatively related to seeing the recession situation as favorable.

One further model was estimated including background variables[5]. A step-by-step procedure was used, eliminating one non-significant path every time, until all remaining path coefficients were significant. This has been labeled Model 3, which offers a good fit (RMSEA = 0.05; CFI = 0.94; GFI = 0.93; $\chi^2 = 664.89$; df = 297; $\chi^2/\text{df} = 2.24$; AIC = 826.89). Nevertheless, using AIC values, Model 2 offers a better fit, which may be explained by the additional complexity of Model 3 with control variables having only few significant effects.

| Indicators | D3 | D5 | D7 | D1 | D4 | D6 | D8 | I1 | I2R | I5R | I8R | A2R | A10 | A15 | A18 | A1 | A7 | A14 | A20 | A4 | A6 | A13 | A19R |
|--------------------------------------|-------|------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| <i>Risk as opportunity</i> | | | | | | | | | | | | | | | | | | | | | | | |
| D3 | – | | | | | | | | | | | | | | | | | | | | | | |
| D5 | 0.38 | – | | | | | | | | | | | | | | | | | | | | | |
| D7 | 0.58 | 0.46 | – | | | | | | | | | | | | | | | | | | | | |
| <i>Risk as threat</i> | | | | | | | | | | | | | | | | | | | | | | | |
| D1 | 0.09 | 0.02 | 0.02 | – | | | | | | | | | | | | | | | | | | | |
| D4 | –0.06 | 0.05 | –0.10 | 0.35 | – | | | | | | | | | | | | | | | | | | |
| D6 | 0.03 | 0.11 | 0.17 | 0.36 | 0.38 | – | | | | | | | | | | | | | | | | | |
| D8 | 0.06 | 0.11 | 0.10 | 0.52 | 0.43 | 0.51 | – | | | | | | | | | | | | | | | | |
| <i>Recessionary economic context</i> | | | | | | | | | | | | | | | | | | | | | | | |
| I1 | 0.24 | 0.21 | 0.20 | –0.14 | –0.11 | –0.09 | –0.17 | – | | | | | | | | | | | | | | | |
| I2R | 0.09 | 0.10 | 0.06 | –0.17 | –0.11 | –0.09 | –0.16 | 0.44 | – | | | | | | | | | | | | | | |
| I5R | 0.05 | 0.07 | 0.05 | –0.19 | –0.12 | –0.16 | –0.18 | 0.30 | 0.41 | – | | | | | | | | | | | | | |
| I8R | 0.07 | 0.11 | 0.07 | –0.19 | –0.15 | –0.13 | –0.19 | 0.50 | 0.53 | 0.37 | – | | | | | | | | | | | | |
| <i>Personal attitude</i> | | | | | | | | | | | | | | | | | | | | | | | |
| A2R | 0.31 | 0.30 | 0.40 | –0.06 | –0.15 | 0.02 | –0.05 | 0.10 | 0.07 | 0.11 | 0.03 | – | | | | | | | | | | | |
| A10 | 0.45 | 0.43 | 0.46 | 0.03 | –0.09 | 0.01 | 0.04 | 0.16 | 0.08 | 0.07 | 0.08 | 0.41 | – | | | | | | | | | | |
| A15 | 0.49 | 0.37 | 0.49 | 0.02 | –0.10 | 0.03 | 0.04 | 0.12 | 0.00 | 0.06 | 0.03 | 0.44 | 0.55 | – | | | | | | | | | |
| A18 | 0.44 | 0.40 | 0.49 | –0.03 | –0.12 | 0.03 | –0.01 | 0.18 | 0.02 | 0.12 | 0.09 | 0.38 | 0.46 | 0.59 | – | | | | | | | | |
| <i>Perceived behavioral control</i> | | | | | | | | | | | | | | | | | | | | | | | |
| A1 | 0.31 | 0.24 | 0.37 | –0.11 | –0.10 | –0.04 | –0.08 | 0.28 | 0.10 | 0.15 | 0.13 | 0.27 | 0.28 | 0.35 | 0.29 | – | | | | | | | |
| A7 | 0.31 | 0.24 | 0.33 | –0.02 | –0.09 | 0.01 | –0.03 | 0.22 | 0.07 | 0.07 | 0.06 | 0.23 | 0.35 | 0.33 | 0.30 | 0.43 | – | | | | | | |
| A14 | 0.36 | 0.34 | 0.35 | –0.09 | –0.15 | –0.09 | –0.06 | 0.27 | 0.13 | 0.07 | 0.13 | 0.29 | 0.39 | 0.46 | 0.39 | 0.46 | 0.45 | – | | | | | |
| A20 | 0.22 | 0.29 | 0.25 | –0.14 | –0.08 | –0.08 | –0.08 | 0.25 | 0.10 | 0.02 | 0.10 | 0.17 | 0.21 | 0.20 | 0.25 | 0.39 | 0.37 | 0.37 | – | | | | |
| <i>Entrepreneurial intention</i> | | | | | | | | | | | | | | | | | | | | | | | |
| A4 | 0.37 | 0.33 | 0.44 | –0.09 | –0.17 | –0.05 | –0.06 | 0.23 | 0.10 | 0.16 | 0.11 | 0.42 | 0.40 | 0.51 | 0.46 | 0.35 | 0.36 | 0.38 | 0.29 | – | | | |
| A6 | 0.44 | 0.39 | 0.49 | –0.06 | –0.16 | –0.06 | –0.04 | 0.27 | 0.12 | 0.16 | 0.11 | 0.38 | 0.55 | 0.50 | 0.49 | 0.40 | 0.46 | 0.49 | 0.30 | 0.59 | – | | |
| A13 | 0.51 | 0.48 | 0.52 | –0.07 | –0.15 | –0.06 | –0.06 | 0.30 | 0.14 | 0.18 | 0.16 | 0.41 | 0.61 | 0.58 | 0.52 | 0.41 | 0.42 | 0.56 | 0.31 | 0.55 | 0.71 | – | |
| A19R | 0.44 | 0.40 | 0.49 | –0.10 | –0.21 | –0.06 | –0.11 | 0.28 | 0.14 | 0.22 | 0.19 | 0.48 | 0.55 | 0.50 | 0.46 | 0.38 | 0.36 | 0.44 | 0.28 | 0.48 | 0.58 | 0.66 | – |
| Note: $n = 619$ | | | | | | | | | | | | | | | | | | | | | | | |

Business start-up
in recession time

645

Table III.
Correlation between
indicators

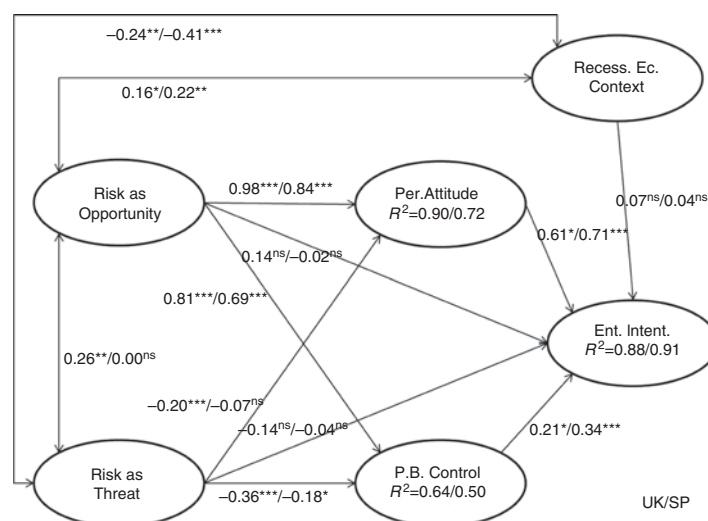


Figure 3.
Results of Model 2
for each country

Notes: ns, not significant; standardized coefficients; Significance levels of path coefficients: $*p<0.05$; $**p<0.01$; $***p<0.001$

Including background variables in the model had a very limited effect on the other path coefficients. Most differences concentrate on the risk-as-opportunity construct and its covariances with risk-as-threat (from 0.13 in Model 2, to 0.19 in Model 3) and recessionary-economic-context (from 0.20 to 0.11). Nevertheless, significance levels remain unchanged, while explained variances register only small (un-noteworthy) increases.

Age and gender were initially included, but removed during the re-specification process, since no significant relationships were found. Table IV presents the path coefficients in Model 3 from control variables to model constructs. As may clearly be seen, the great majority of relationships are established with risk perceptions and recessionary environment, whereas very few are established with motivational constructs or entrepreneurial intention. This serves as additional support for the theory, since background variables would only exert an indirect effect on planned behavior constructs (PA, PBC and intention).

Labor experience as an employee is associated with less positive personal attitude toward entrepreneurship (-0.08 path coefficient) and also with stronger perception that

Table IV.
Path coefficients
of control variables
on model constructs

| | Risk as opportunity | Risk as threat | Recessionary environment | Personal attitude | Perceived behavioural control | Entrepreneurial intention |
|--------------------------|------------------------|-------------------|-----------------------------|----------------------|-------------------------------------|------------------------------|
| Employment experience | — | 0.212*** | — | -0.083* | — | — |
| Self-employment exp. | 0.218*** | -0.143** | 0.199*** | — | — | — |
| Know entrepreneur | 0.168*** | -0.105* | 0.137** | — | — | — |
| Country | -0.100* | 0.140** | -0.226*** | 0.110** | -0.138*** | — |

Notes: Control variables are dichotomous (0 = No/UK; 1 = Yes/Spain). *, **, ***Significant at $p<0.05$, $p<0.01$, and $p<0.001$ levels, respectively

entrepreneurial action involves threatening risks (0.21). Conversely, self-employment experience or personally knowing an entrepreneur tend to diminish this risk-as-threat perception (-0.14 and -0.11 , respectively), while increasing risk-as-opportunity perceptions (0.22 and 0.17, respectively). Similarly, they also lead to a more positive valuation of the recessionary environment (0.20 and 0.14, respectively). This helps clarify the way through which these background factors are related to entrepreneurial intention.

Further, the inclusion of a control variable to account for the country effect helps explain different perceptions by country. In particular, Spanish respondents consider risk as a threat to a greater extent (0.14), while they see risk less as an opportunity (-0.10), and the recessionary environment less favorably (-0.23). Regarding motivations, Spaniards perceived themselves as having a more positive personal attitude (0.11), and a lower behavioral control (-0.14).

Discussion

The main aim of this research was to develop and test a model to examine the psychological (risk as opportunity, risk as threat) and environmental (recessionary economic context) factors related to entrepreneurial motivation (personal attitude and behavioral control) and intention. Consequently, an exploratory structural model was developed to incorporate these factors. The model allowed us to examine the relative importance of antecedents of intention as well as theoretically driven direct and indirect paths. The model explained a highly satisfactory percentage of the variance in entrepreneurial intention, and even in their motivational antecedents. With the exception of one hypothesis (*H1*), all other hypothesized paths were significant (*H2-H6*). Overall, the model seems fairly robust because it held even with the presence of a range of control variables, and also for each country in most paths. In fact, the model without control variables outperformed the model including them. The psychological factor of risk perception (risk as opportunity and risk as threat) emerged as the strongest predictor of entrepreneurial intention, compared to the environmental factor of recessionary economic context, though both were significant.

Findings suggest the risk-intention link is fully mediated by entrepreneurial motivation. These findings are consistent with the two theoretical mechanisms advocated by previous research (Barbosa *et al.*, 2007b; Douglas and Shepherd, 2000; Kolvereid, 1996; Macko and Tyszka, 2009; Zhao *et al.*, 2005). Regarding the first, risk perception (risk as opportunity or risk as threat) is linked to attitudes toward entrepreneurship. The more risk is seen as an opportunity, the stronger the salient beliefs conforming a higher level of PA (positive valuation of entrepreneurship), whereas the more risk is seen as a threat, the stronger the salient beliefs conforming a lower level of PA (negative valuation of entrepreneurship).

Second, as expected, the findings suggest behavioral control also acts as a mediating mechanism, in the risk-intention link. Fear of missing an opportunity (missing-the-boat risk) can enhance behavioral control (greater sense of ease about pursuing entrepreneurship in terms of feeling able and in control), which in turn enhances entrepreneurial intentions and facilitates the new venture creation process. Conversely, the findings suggest a fear of failure (sinking-the-boat risk) is likely to act in the opposite way. It tends to lower PBC (feelings of self-efficacy and controllability), which in turn lowers intention. These findings lend support to the theory and literature on which they were based (Barbosa *et al.*, 2007b; Dickson and Giglierano, 1986; Macko and Tyszka, 2009; Venkataraman, 2002; Zhao *et al.*, 2005).

An unexpected finding, however, was that entrepreneurial risk perception is not directly linked with intention, as other researchers had suggested (Barbosa *et al.*, 2007b;

Dickson and Giglierano, 1986; Venkataraman, 2002), since risk as opportunity is considered to generate a bias for action, or risk as threat a bias for constraining action. Nevertheless, it is worth noting that Barbosa *et al.* (2007b) did not include personal attitude in their analysis. Therefore, the direct effect they found of risk on intention may be the result of model misspecification. This would be broadly consistent with the line of thinking by Luthje and Franke (2003) that motivational attitudes mediate the link between risk-taking variables and intention. In any event, further research is surely required on this issue, specifically examining the notion of risk, generating a bias for action or constraint. A second explanation may be related with the specific characteristics of the sample used in this study. Further research with samples from different countries is important before discounting a direct effect.

Furthermore, as predicted, economic context was directly linked with entrepreneurial intentions (*H5*). If individuals consider a recessionary economic context as a favorable opportunity to starting up a business, they are more likely to have stronger intentions (e.g. conviction and determination for business start-up). Conversely, if they consider it pessimistically (e.g. hostile environment), then they are less likely to have strong entrepreneurial intentions. These results suggest a direct contextual link with intentions (Luthje and Franke, 2003). Nevertheless, this link is relatively small (the relationship did not hold for each sub-sample separately). Further research is required to examine these country effects and/or whether the operationalization of this variable needs improvement (discussed later).

Significant covariances were found between risk perception and recessionary economic context (*H6*). This supports the literature that there is a relationship between these constructs (Roszkowski and Davey, 2010). Respondents appraising risk as an opportunity (positive risk perception) also viewed the recessionary economic context favorably. Conversely, respondents appraising risk as a threat (negative risk perception) also viewed the recessionary economic context unfavorably. Further research and more specific studies will be needed to investigate the existence and the direction of this relationship in more depth, though our research does suggest this is a worthwhile avenue of research, especially given the prolonged and deep nature of the current recession.

Despite the support for our research model, however, the findings should be treated tentatively because of the exploratory nature of this research. A possible related limitation would be the operationalization of the recessionary economic context scale. Although the initial exploratory factor and reliability analysis suggest sound psychometric properties, further development and testing may be interesting. For example, to investigate the extent to which our generic recessionary economic context scale can be developed into sub-scales assessing different dimensions, e.g. financial availability, expected market demand, affect toward the context and so forth. A second limitation was that the data were not drawn randomly from the UK or Spain, and limited to a university in each country. Although the data are relatively representative of HEIs in the two countries examined and the analysis can be considered explanatory, the results should be interpreted with caution and they cannot be generalized to European countries in general[6]. Additionally, since cultural context can also play a role in entrepreneurial intentions (Liñán and Chen, 2009), the model may need to be tested further to ensure its cross-cultural stability in non-European countries. Nonetheless, the findings appear promising and quite robust.

Bearing in mind the above strengths and limitations of this study, implications that can be drawn from this paper are twofold. First, in order to enhance entrepreneurial intention (and thus behavior) among university students, it is important to note the

finding that entrepreneurial risk perception emerged as the strongest explanation of intention, albeit via entrepreneurial motivation. New research suggests that entrepreneurial risk perception (and risk-taking) can be taught and learned (Kyrö and Tapani, 2007). This suggests that, for example, universities and entrepreneurial development bodies should consider this in entrepreneurship education and how this education can impact on students risk perception and entrepreneurial motivation. We concur with Barbosa *et al.* (2007a) that this is an important move forward in evaluating the impact of entrepreneurship education and to take account of these key dimensions in pedagogical design. For example, educators could experiment, pre- and post-educational interventions to examine more deeply students psychology of risk as well as the TPB constructs of entrepreneurial motivation and intention. This would encompass examining how students evaluate risk and explore the possibility of students not only seeing risk as a negative threat (i.e. fear of failure and the downside of risk), but also risk as a positive opportunity (i.e. missing a good opportunity and the upside of risk). This would include an understanding of the potential for personal gains (e.g. professional development), financial gains (e.g. chances of financial benefits) and social gains (e.g. enhanced regard from significant others; Barbosa *et al.*, 2007a, b).

The second implication concerns the finding that risk perception and economic context are related. This has implications because it suggests that students' views on risk perception and economic context, even during a recession, may be changed. That is, students could be made aware that, despite a recessionary economic context, the environment could provide good conditions for starting a new business as, for example, new opportunities are emerging as other companies are folding, and companies are looking for alternative suppliers. This could help them make a more informed appraisal of risk as an opportunity, rather than believing the "doom and gloom" media headlines regarding lower customer demand and expected returns and thus assuming the context is too restrictive. Indeed, Stangler (2009) asserts that many of the world's top companies started during a time of recession. This approach may help to inspire and encourage students to at least consider their career options more carefully and not automatically dismiss entrepreneurship during times of recession.

Both of these implications highlight the biases of individual reasoning and judgment. To minimize these biases, the literature in various ways identifies two themes: attitudinal and technical (Ajzen, 1988; Barbosa *et al.*, 2007a; Hogarth, 1987; Luthje and Franke, 2003). The attitudinal theme broadly suggests that the key to understanding the entrepreneurial behavior of individuals lies in understanding the attitudes behind it. The technical theme suggests that educational tools and decision aids can help entrepreneurial decision making by reducing human perceptual errors. For example, entrepreneurship is all about losses. In other words, decision making can be enhanced, or at least more informed, by teaching individuals to become aware of such (potential) perceptual errors, and thus better understand their own attitudes and perceptions toward entrepreneurship (cf. Huczynski and Buchanan, 2013).

Conclusions

Overall, this research has contributed toward the literature on entrepreneurial intention by developing and testing an entrepreneurial intentions model incorporating risk perception, entrepreneurial motivation, and intention, along with the role of a recessionary economic context. Such a configuration of constructs brings together three streams of research (psychology of risk, the TPB and economic context). Yet, this has received little attention in previous research. The results support the value of such

an approach. It provides evidence of a number of effects, but the main one being indirect. This emphasizes the important mediating role of entrepreneurial motivation (both personal attitudes toward entrepreneurial behavior and perceived behavioral control), between risk perception and entrepreneurial intention. It also sheds some light on the relationship between risk perception and economic context. These explanations offer, we hope, some implications to entrepreneurship educators and pedagogy regarding the importance of some under-researched psychological and economic constructs in entrepreneurial intention. Further research based on this framework should also be carried out to examine these constructs in relation to entrepreneurial behavior, based upon and extending from, the TPB, which the present authors plan to pursue. Further research is also worthwhile to consolidate and extend these findings to examine a number of constructs and questions not considered in this research. For example, since risk perception is a multidimensional construct, how are domain-specific elements like personal, social or financial risk perception, linked with the entrepreneurial motivation constructs, namely, attitudes toward entrepreneurial behavior, perceived behavioral control, and entrepreneurial intentions? More research on these avenues, we believe, would usefully enhance our understanding of entrepreneurial intention and contribute toward developing strategies and initiatives for entrepreneurship education and teaching.

Notes

1. We are grateful to one anonymous reviewer for helping us develop this hypothesis.
2. Data from government/published sources in the UK (HESA, 2010; MMU, 2010; Universities UK, 2012) and Spain (MECD, 2012).
3. New businesses of less than three months according to GEM.
4. New businesses of three to 42 months according to GEM.
5. Full graphical representation of research model with background variables available on request.
6. We are grateful to an anonymous reviewer for pointing out this issue.

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Appendix. Final items (Please read in conjunction with main text)

TPB *measures* (PA, PBC, *entrepreneurial intentions*). Seven-point Likert scale (1 = total disagreement, 4 = neither agree/disagree; 7 = total agreement).

- A1. Starting a firm and keeping it viable would be easy for me
- A2R. A career as an entrepreneur is totally unattractive to me
- A4. I am ready to do anything to be an entrepreneur
- A6. I will make every effort to start and run my own business
- A7. I am able to control the creation process of a new business
- A10. If I had the opportunity and resources, I would love to start a business
- A13. I am determined to create a business venture in the future
- A14. If I tried to start a business, I would have a high chance of being successful
- A15. Being an entrepreneur would give me great satisfaction
- A18. Being an entrepreneur implies more advantages than disadvantages to me
- A19R. I have a very low intention of ever starting a business
- A20. I know all about the practical details needed to start a business

Risk perception measures (*risk as opportunity*, *risk as threat*). Seven-point Likert scale (1 = total disagreement, 4 = neither agree/disagree; 7 = total agreement).

- D1. Starting a new business is very risky
- D3. I see the possibility of starting a business as a potential opportunity to pursue
- D4. The probability of a new venture doing poorly is very high
- D5. If I don't start my own business, I may be missing a great opportunity
- D6. There is great uncertainty when predicting how well a new venture will do
- D7. Overall I would label the option of starting a business as something positive
- D8. The overall riskiness of a new venture is high

Economic context measure. Seven-point Likert scale (1 = total disagreement, 4 = neither agree/disagree; 7 = total agreement).

- I1. I am happy to start a new business in the current economic climate
- I2R. For me, starting up a business in the current recession is a serious barrier
- I5R. Starting a business in the current economic climate would pose serious financial difficulties for me
- I8R. I see the current economic climate as unfavorable for me to start a business

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Business start-up in recession time

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The impact of global economic crisis on SMEs

Impact
of economic
crisis on SMEs

Does entrepreneurial orientation matter?

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Abstract

Purpose – The purpose of this paper is to examine the role of the entrepreneurial orientation (EO) in global economic crisis and whether it can mitigate the negative effects of economic crisis both on firm's operations and on firm's financial performance.

Design/methodology/approach – A quantitative approach is used to test the hypotheses. Principal component analysis and multiple regression analysis are used on the empirical survey data.

Findings – Results based on a sample of almost 200 Finnish small and medium-sized enterprises indicated that the different dimensions of the EO can have diverging effects on how firms are impacted by the recession. In general, the more innovative and proactive the firm is, the less its operations are affected by the recession and the more risk-taking the firm is, the more its profitability is affected by recession.

Research limitations/implications – A longitudinal design – rather than the current cross-sectional design – would give a better premiss to explore the causal relationships among the research variables.

Originality/value – The paper is one of the first works linking EO with the effects of recession at the firm's operational level and the paper expands prior knowledge by taking the EO-performance relationship into the context of recession.

Keywords Finland, Small to medium-sized enterprises, Small businesses, Recession, Organizational performance, Entrepreneurial orientation

Paper type Research paper

1. Introduction

Between late 2007 and the second quarter of 2009, the global economy slid into a severe economic crisis (Naidoo, 2010). This global economic crisis has not only been severe for large enterprises, but also for small and medium-sized enterprises (SMEs), which have become an increasingly important component of economic development (Paul *et al.*, 2007). The international financial crisis caused an economic downturn in Finland, too. For instance, since the last quarter of 2008 the number of layoffs, order cancellations and financial difficulties has increased drastically, which has led among others to a 30 percent increase in the number of bankruptcies among the Finnish SMEs. This recent sudden and extraordinary decline has shown how turbulent and vulnerable the international and also the national business environment can nowadays be. Theory and empirical evidence suggest that major economic crises have profound effects on firms, but the effects are uneven between firms (Narjoko and Hill, 2007). In this framework



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it is essential to further investigate if there are some firm-specific strategic factors that enable SMEs to better survive such challenging changes in the surrounding environment. For decades economic recessions and firms in these harsh environments have offered researchers a fruitful setting. A sizeable body of literature called the turnaround strategy literature (Pearce II and Robbins, 1994; Laitinen, 2000; Cater and Schwab, 2008; Naidoo, 2010) has focused on the strategies used by firms to survive and meet the performance targets during recessionary periods. Some of these turnaround strategies resemble very closely the dimensions of the entrepreneurial orientation (EO), and we are therefore interested to see if the EO has a positive effect on firms struggling to survive the recession.

During the last few decades, EO has emerged as a major construct within the strategic management and entrepreneurship literature. Covin *et al.* (2006) define EO as a strategic construct whose conceptual domain includes certain firm-level outcomes and management-related preferences, beliefs, and behaviors as expressed among a firm's top-level managers. Runyan *et al.* (2008) argue that EO is evidenced through visible entrepreneurial tendencies toward innovativeness, proactiveness and risk taking. Miller (1983) and later on Covin and Slevin (1989) operationalized these constructs and see them as central to EO. According to Rauch *et al.* (2009) these dimensions of EO can be defined as follows: innovativeness represents creativity and experimentation through the introduction of new products/services as well as technological leadership via R&D in new processes. Risk-taking describes the nature of easily venturing into the unknown, borrowing heavily, and/or committing remarkable resources to ventures in uncertain environments. Proactiveness is an opportunity-seeking, forward-looking perspective characterized by the introduction of new products and services ahead of competition and acting in anticipation of the future demand.

In recent years there has been an increased focus on the relationship between a firm's strategic orientation and firm performance (Madsen, 2007). Earlier studies have generally found a positive relationship between EO and firm performance (Madsen, 2007; Wiklund and Shepherd, 2005; Jantunen *et al.*, 2005). However, there are also studies where no such relationship has been found (Smart and Conant, 1994). Typically, the measure that has been used to assess firm performance has been a combination of both profitability measures and growth measures (Avlonitis and Salavou, 2007; Wiklund, 1999; Covin and Slevin, 1989). There are also a few studies that have merely explored the relationship between EO and firm growth (Moreno and Casillas, 2008; Covin *et al.*, 2006). The findings of these studies have confirmed that there is a positive relationship between EO and the firm's rate of growth.

The purpose of this study is to ascertain if EO can mitigate the negative effects of economic crisis both on firm's operations and on firm's financial performance. This study contributes to the EO literature in two ways: first, as far as we know, this is the first work to link EO with the effects of recession at the firm's operational level. Second, as discussed in the paragraph above, the relationship between EO and performance is well known, but we expand this knowledge by taking the EO-performance relationship into the context of recession.

The article is structured as follows: after the introductory section is a section that defines the concept, reviews the relevant literature and presents the research hypotheses. Then comes a description of the methodology used in empirical research. In the following section, the main findings are presented. Finally, Section 5 summarizes the results along with their implications.

2. Theoretical framework and hypotheses

A substantial amount of research has examined the concept of EO thus it has become a central concept in the domain of entrepreneurship (Covin *et al.*, 2006). Rauch *et al.* (2009) point out in their meta-analysis that more than 100 studies dealing with EO have been conducted, which has led to a wide acceptance of the conceptual meaning and relevance of the concept.

The dimensions of EO

Miller (1983) conceptualized the three focal dimensions of EO as innovativeness, risk-taking and proactiveness and these three dimensions have since been used consistently in the literature (Dimitrator *et al.*, 2002; Kemelgor, 2002). Lumpkin and Dess (1996) describe innovativeness as follows: innovativeness reflects a firm's tendency to engage in and support new ideas, novelty, experimentation, and creative processes that may result in new products, services, or technological processes. Innovativeness represents a basic willingness to depart from existing technologies or practices and venture beyond the current state of the art. Lumpkin and Dess (1996) see innovativeness as an important component of an EO, because it reflects an important means by which firms pursue new opportunities. According to Baird and Thomas (1985) there are three different types of strategic risk taking, such as venturing into the unknown, heavy borrowing, and/or committing large portions of corporate assets in uncertain environments. Similarly, Lumpkin and Dess (1996) state that firms with an EO are often typified by risk-taking behavior, such as incurring heavy debts or making significant resource commitments in the interests of obtaining high returns by seizing opportunities in the marketplace. Rauch *et al.* (2009) describe proactiveness as an opportunity-seeking, forward-looking perspective characterized by the introduction of new services and products ahead of the competition and acting in anticipation of future demand.

Besides these three most commonly used dimensions Lumpkin and Dess (1996) argue that two additional dimensions, competitive aggressiveness and autonomy, are also salient components of EO. Lumpkin and Dess (2001) define these two additional dimensions as follows: competitive aggressiveness is said to reflect the intensity of a firm's effort to outperform industry rivals, characterized by a strong offensive posture and a forceful response to competitor's actions. Autonomy is independent action by an individual or team aimed at bringing forth a business concept or vision and carrying it through to completion.

The usage of the EO model with all the aforementioned five dimensions has been rare in the EO literature when compared with the use of the model with three dimensions. Rauch *et al.* (2009) show in their meta-analysis that only in one study (George *et al.*, 2001) has been used all these five dimensions. Whereas, in 29 studies (Covin and Slevin, 1990; Covin *et al.*, 1994; Slater and Narver, 2000; Bhuian *et al.*, 2005; Wiklund and Shepherd, 2003) have been used these same three dimension as we are using in our study.

Rauch *et al.* (2009) state that the focal dimensions of EO are usually highly intercorrelated with each other, which leads to combining these dimensions into one single factor. In the EO literature there is no solid consensus on the dimensionality of the EO construct. On the one hand, scholars such as Covin and Slevin (1989) argue that the EO construct is best viewed as a unidimensional concept and on the other hand, for example, Lumpkin and Dess (2001) suggest that the dimensions of EO may relate differently to firm performance. In this study we use the latter approach, allowing the

dimensions of EO to have different effects on the firm's operations and financial performance during economic downturn.

The EO-performance relationship

The modern business environment is one in which the pace of change is fast and product and business model lifecycles are shortened, the future profit streams from existing operations are uncertain and businesses need to constantly seek out new opportunities. Therefore, firms may benefit from adopting an EO (Rauch *et al.*, 2009). Wiklund (1999) relates the positive influence of EO on performance to the first-mover advantages and the tendency to take advantage of emerging opportunities implied by EO. Zahra and Covin (1995) argue that firms with EO can "skim" the markets ahead of their competitors by targeting premium market segments and charging high prices. Wiklund (1999) points out that these firms monitor market changes and respond rapidly, thus capitalizing on emerging opportunities. Innovation keeps them ahead of their competitors, gaining a competitive advantage that leads to improved financial results. Proactiveness gives firms the capability to present new products or services to the market before their competitors, which also gives them a competitive advantage. Furthermore, Wiklund (1999) also states that there is a reason to believe that the relation between EO and performance may be especially strong in the context of small firms. Most likely, smallness *per se* enhances flexibility and innovation but limits competitiveness in other strategic dimensions.

Moreno and Casillas (2008) point out that the fairly extensive body of literature on the relationship between EO and firm performance is dominated by two types of work. First, there are studies that present general models describing the characteristic of the said relationship, identifying the moderating and mediating variables and striving to establish wide-ranging propositions (Stam and Elfring, 2008; Marino *et al.*, 2002; Covin and Slevin, 1991). Second, as Moreno and Casillas (2008) note, a wide range of studies have attempted to empirically verify partial models of said relation. This field of research contains, in an isolated and independent manner, some of moderating variables, those related either to environment (Tan and Tan, 2005) or to the firm's internal dimensions (Wang, 2008).

Several empirical studies have found that firms with high EO perform better than firms with low EO, for example Keh *et al.* (2007) found that EO plays an important role in enhancing firm performance. Similarly, Wiklund and Shepherd (2003) found a strong correlation between EO and performance, whereas Wiklund (1999) showed that investments in EO may be worthwhile for small firms since there is a positive relationship between EO and performance and the relationship actually increases over time. On the other hand, some studies have shown that the relationship between EO and performance is not so straightforward. Bhuian *et al.* (2005) found that entrepreneurship is one of the key elements in organizational success, but the relationship is shaped like an inverted U, meaning that a high degree of entrepreneurship is not always desirable in certain market and structural conditions. Similarly, Tang *et al.* (2008) found a curvilinear relationship between EO and firm performance in Chinese firms, implying that blindly striving to pursue as high EO as possible may under some conditions lead to adverse outcomes. Besides the relationship between EO and financial performance some studies have found that EO also has a positive influence on new product development, product innovativeness, and number of patents (Avlonitis and Salavou, 2007; Frishammar and Hörte, 2007; Kemelgor, 2002).

The literature shows that the variety of measures that have been used to assess firm performance has been fairly diverse. Several studies (Runyan *et al.*, 2008; Madsen, 2007; Lumpkin and Dess, 2001; Wiklund and Shepherd, 2003) have used perceived performance indicators to assess firm performance. The items used to form the performance indicator were typically based on the manager's subjective views about the firm's profitability, growth, market share in relation to its main competitors. On the other hand, some studies (Covin *et al.*, 2006; Zahra and Garvis, 2000) have utilized secondary data to capture both the growth and profitability dimension of company financial performance. For example, Zahra and Covin (1995) combined measures of return on assets (ROA), return on sales (ROS) and growth into a single performance indicator. Non-financial data can also be used in entrepreneurship research to assess the perceptions of the SME's management regarding the performance of the firm because of a strong correlation between financial and non-financial data (Covin, 1991). However, this kind of an approach has been used somewhat infrequently in the literature (Rauch *et al.*, 2009). One common factor for the performance indicators based either on perceived data or secondary data is the fact that in both cases the indicator contains growth measures and profitability measures. According to Moreno and Casillas (2008) such an approach may not be the most suitable because growth dimension and profitability dimension are sometimes contradictory and should therefore not be combined into one single indicator.

As mentioned earlier, Lumpkin and Dess (2001) suggest that the dimensions of EO may relate differently to firm performance. Therefore, in the context of the recession, we hypothesize as follows:

H1a. The more innovative and proactive firm is, the less its financial performance will be affected by the crisis.

H1b. The more risk-taking firm is, the more its financial performance will be affected by the crisis.

Turnaround strategies

Cater and Schwab (2008) define turnaround strategies as a set of consequential, directive long-term decisions and actions targeted at the reversal of a perceived crisis that threatens the firm's survival. Moreover, Laitinen (2000) carries the definition further as defining a turnaround strategy as a strategy that companies apply when responding to uncertainty and changes in the environment and attempting to turn threats into opportunities during a deep recession.

Pearce II and Robbins (1994) argue that firms in economic distress may undertake recovery implementing recovery strategies, which are identified as primarily entrepreneurial-oriented, primarily efficiency-oriented, or a combination of both. Pearce II and Robbins (1994) characterize the difference between these two strategies as follows: entrepreneurial recovery strategies involve actions to "do things differently" whereas efficiency recovery strategies entail actions designed to "do basically the same things on a smaller, more efficient scale". These entrepreneurial recovery strategies come close to the innovation dimension of EO, since they involve reformulations of firm's products, services, markets, or principal technologies in ways that represent a new or radically altered competitive posture. The findings of Pearce II and Robbins indicate that firms that experienced external cause downturns were more successful in their turnaround efforts when they emphasized entrepreneurial activities in the recovery response.

Furthermore, Pearce II and Michael (2006) also show that innovative firms which introduce new products especially during a recession can be very successful.

Features similar to the proactiveness component of the EO have also been beneficial for companies struggling with unfavorable economic conditions. Laitinen (2000) notes that companies that have been in decline have managed a sharp and sustained recovery by constantly monitoring their environment, seeking opportunities and making improvements.

Therefore, we hypothesize the following:

H2a. The more innovative and proactive firm is, the less its operations will be affected by the crisis.

The risk-taking component of EO is characterized by committing a large amount of resources to uncertain ventures and borrowing heavily. In uncertain and recessionary periods such behavior may be detrimental to the companies. Geroski and Gregg (1996) studied the effects of recession on firms in the UK. They showed that firms which were extremely severely affected by the recession were firms which had higher ratios of debt to assets than firms which were less severely affected by the recession. Similarly, Ofek (1993) showed that highly-leveraged firms responded faster than their less-leveraged counterparts to financial distress. The highly-leveraged firms took actions such as laying off employees and cutting dividends. Keeping the heavy borrowing nature of the risk-taking component in mind, we hypothesize the following:

H2b. The more risk-taking firm is, the more its operations will be affected by a crisis.

3. Research method

Sample and data collection

The empirical data used to test the hypotheses were drawn from a mail survey conducted in spring 2009 by means of a structured questionnaire. The initial population consisted of Finnish small private limited companies (they typically have few shareholders and are usually owner-managed family businesses) with a sales turnover between one and ten million euros. Hypotheses were tested in a multiple industry setting, because of a greater generalizability. A total of 13,495 firms were identified from the Voitto + database, and a systematic random sample of 1,026 firms was drawn. The pre-tested survey questionnaire with an introductory cover letter was mailed to the respondents, who were assured of confidentiality and promised a summary of the results. A reminder was sent to those who had not responded within two weeks. Final responses were received from 194 companies, yielding a satisfactory effective response rate of 18.9 percent (194/1,026). It was possible to obtain financial information about the companies via Voitto + database, a commercial database containing financial statements of over 82,000 Finnish firms. The financial measures used in this study are based on the financial statements of 2009. Non-response bias was checked on a number of key variables by comparing the early (first-round) respondents with the late respondents (following the suggestions of Armstrong and Overton, 1977) and no significant differences were found between these two groups.

Measures

We utilize nine items to capture the three dimensions of EO conceptualized by Miller (1983). The items are based on the work of Covin and Slevin (1990). However, they

were slightly adapted to fit better with the context of Finnish small enterprises. A principal component analysis of the EO items (Table I) resulted in two components explaining together 61 percent of the variance in the items. The items measuring innovativeness and proactiveness merged into the first component, while risk-taking items loaded highly on the second component. The internal consistency of the scales was good, as the Cronbach's α -values were 0.865 for innovativeness/proactiveness and 0.671 for risk-taking, respectively.

The items of different operations were adapted from scales used by Geroski and Gregg (1993). They found that some firms were more severely affected by the recession than others. They also identified the parts of operations which were most affected. Their survey contained 32 detailed questions. The questions were divided into three main sections: "the effects of the recession", "human resource management" and "company organization". The aim was to ascertain how severely the firms were affected by the recession; how much the recession affected their trading position, pay arrangements, their workforce composition and their potential for financing (credit limits by banks). In our questionnaire some of the original items were omitted as they were not deemed suitable for small Finnish firms. The final measure included 20 items all assessed on a five-point Likert scale with the anchors 1 – totally disagree, 5 – totally agree, see Table II for exact item wordings and factor analysis results.

In a principal component analysis we were able to identify six dimensions explaining 64 percent of total variance. The dimensions were:

- (1) impact on sales and profitability (4 items);
- (2) impact on short-term financing (five items);

| Item | Innovativeness and proactiveness | Risk taking | Communality |
|---|--|----------------|-------------|
| Continuous renewal and innovation are important for our company (I) | 0.81 | 0.24 | 0.71 |
| We invest heavily in developing new (I) products, services and business practices | 0.81 | 0.17 | 0.68 |
| In our company, new ideas come up all the time (I) | 0.79 | 0.12 | 0.64 |
| We aim at being at the forefront of development in our business sector (P) | 0.76 | 0.22 | 0.63 |
| Lately we have launched many new products/services (I) | 0.73 | 0.14 | 0.55 |
| Our company often acts before the competitors do (P) | 0.63 | 0.19 | 0.43 |
| In uncertain situations we are not afraid to take substantial risks (R) | 0.20 | 0.82 | 0.68 |
| Bold action is necessary to achieve our company's objectives (R) | 0.32 | 0.74 | 0.64 |
| We prefer the cautious line of action even if some opportunity might be lost that way (R, Reversed) | -0.19 | -0.69 | 0.52 |
| Eigenvalue | 4.22 | 1.25 | |
| Cum. percent of variance | 46.90 | 60.80 | |

Notes: Principal component analysis with varimax rotation; KMO measure of sampling adequacy = 0.846, Bartlett $\chi^2 = 686$ with 36 df, $p = 0.000$, MSA for individual items ranged from 0.73 to 0.93; I – innovativeness, P – proactiveness, R – risk taking

Table I.
Principal component
loadings of the EO items

Table II.
Principal component
loadings of the effects of
economic downturn

| Item | Component | | | | | |
|---|-----------|-------|-------|-------|-------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| The downturn has decreased our sales | 0.85 | | | 0.11 | | |
| The downturn has decreased our profitability | 0.84 | | 0.15 | | 0.17 | |
| The crisis makes our operations harder overall | 0.74 | 0.23 | | 0.14 | | 0.16 |
| Customers have canceled their orders | 0.44 | | | 0.30 | 0.34 | 0.22 |
| We have not been able to pay dividends | | 0.77 | | | 0.18 | 0.11 |
| We have cut down the principal owner's salary | 0.12 | 0.66 | 0.14 | 0.22 | | |
| It has been hard to get financing | 0.12 | 0.66 | 0.41 | | | |
| Lack of financing jeopardizes our future | 0.17 | 0.64 | 0.54 | | | |
| The crisis increases the risk of bankruptcy | 0.40 | 0.61 | 0.34 | | | |
| We have canceled investments due to lack of financing | 0.14 | 0.25 | 0.79 | | | 0.17 |
| We have delayed our investments | 0.14 | 0.14 | 0.72 | 0.30 | | |
| Our interest margin has been raised | | 0.15 | 0.60 | −0.23 | 0.28 | |
| We have dismissed personnel | | | 0.12 | 0.82 | 0.12 | |
| We have laid off personnel | 0.23 | 0.16 | | 0.79 | | |
| We have outsourced our operations | −0.16 | 0.31 | | | 0.73 | |
| We have had to lower prices | 0.38 | −0.13 | 0.13 | | 0.70 | 0.13 |
| Competition has become more aggressive | 0.26 | | | 0.16 | 0.58 | 0.27 |
| Our customers' terms of payment have become longer | | | | 0.10 | | 0.84 |
| Our credit losses have increased | 0.18 | 0.16 | | −0.18 | | 0.73 |
| Our suppliers have tightened their payment terms | −0.16 | 0.13 | 0.41 | 0.12 | 0.18 | 0.46 |
| Eigenvalue | 5.04 | 2.49 | 1.75 | 1.34 | 1.10 | 1.06 |
| Cum. percent of variance | 25.19 | 37.65 | 46.42 | 53.11 | 58.63 | 63.93 |

Notes: Extraction method: principal component analysis; rotation method: varimax with Kaiser normalization; rotation converged in nine iterations

- (3) impact on long-term financing (three items);
- (4) impact on personnel (two items);
- (5) impact on the competitive situation (three items); and
- (6) impact on payment terms (three items).

We computed the mean score of items to represent each of the six dimensions, and additionally a total summed score of all 20 items to represent the perceived total impact of the economic downturn.

The measures for financial performance were obtained from the Amadeus database. We included financial measures representing scale, liquidity, and profitability over the three-year period from 2007 to 2009, which was the most recent year available for the majority of the companies at the time of the study. The scale of the company was measured by the number of employees, operating revenue in thousands of euros, and total assets in thousands of euros. The liquidity measure was current ratio, and profitability measures included return on total assets as a percentage, and profit margin percentage.

4. Results

The descriptive information of our key variables in the sample is shown in Table III. The average size of the respondent companies was about 2.3 million euros in sales turnover and 18 employees. The largest companies had about 13 million euro turnover

| | | | | | | Impact of economic crisis on SMEs |
|---------------------------------|----------|---------|-----------|----------|----------|---|
| Variable | <i>n</i> | Minimum | Maximum | Mean | SD | |
| Firm age | 192 | 4.00 | 107.00 | 12.00 | 11.98 | 935 |
| Sales (€1,000) | 192 | 242.00 | 10,803.40 | 2,045.50 | 2,049.83 | |
| Innovativeness-proactiveness | 192 | 1.17 | 5.00 | 3.50 | 0.79 | |
| Risk-taking | 192 | 1.00 | 4.67 | 2.95 | 0.83 | |
| International sales (%) | 185 | 0.00 | 100.00 | 10.39 | 23.52 | |
| Impact on sales and profits | 193 | 1.00 | 5.00 | 3.36 | 0.97 | |
| Impact on short-term financing | 190 | 1.00 | 5.00 | 1.74 | 0.85 | |
| Impact on long-term financing | 189 | 1.00 | 5.00 | 1.91 | 0.94 | |
| Impact on personnel | 190 | 1.00 | 5.00 | 1.92 | 1.26 | |
| Impact on competition | 193 | 1.00 | 5.00 | 2.87 | 0.98 | |
| Impact on terms of payment | 192 | 1.00 | 4.67 | 2.57 | 0.90 | |
| Overall impact | 190 | 21.00 | 81.00 | 47.85 | 11.91 | |
| Operating revenue 2009 (€1,000) | 177 | 0.00 | 12,759.00 | 2,349.78 | 2,025.50 | |
| Operating revenue 2008 (€1,000) | 182 | 18.00 | 21,889.31 | 3,018.75 | 2,783.04 | |
| Operating revenue 2007(€1,000) | 178 | 486.16 | 12,630.56 | 2,701.30 | 2,052.52 | |
| Number of employees 2009 | 138 | 1.00 | 150.00 | 17.98 | 20.91 | |
| Number of employees 2008 | 130 | 1.00 | 186.00 | 20.25 | 27.49 | |
| Number of employees 2007 | 152 | 1.00 | 159.00 | 16.74 | 19.93 | |
| Total assets 2009 (€1,000) | 177 | 85.00 | 82,202.76 | 2,062.00 | 6,374.26 | |
| Total assets 2008 (€1,000) | 182 | 121.00 | 73,841.60 | 2,112.91 | 5,745.74 | |
| Total asset 2007 (€1,000) | 178 | 204.00 | 14,221.56 | 1,597.69 | 2,085.69 | |
| Current ratio 2009 | 177 | 0.06 | 82.24 | 4.16 | 8.04 | |
| Current ratio 2008 | 182 | 0.08 | 42.72 | 3.16 | 4.01 | |
| Current ratio 2007 | 178 | 0.28 | 20.94 | 2.78 | 2.83 | |
| Return on total assets 2009 (%) | 176 | − 83.72 | 59.21 | 8.94 | 18.14 | |
| Return on total assets 2008 (%) | 182 | − 36.00 | 71.46 | 15.13 | 15.69 | |
| Return on total assets 2007 (%) | 178 | − 2.83 | 64.84 | 19.63 | 13.54 | |
| Profit margin 2009 (%) | 174 | − 33.86 | 66.20 | 5.38 | 11.26 | |
| Profit margin 2008 (%) | 181 | − 41.44 | 61.29 | 7.91 | 10.77 | |
| Profit margin 2007 (%) | 178 | − 2.97 | 72.94 | 10.45 | 9.88 | |

Table III.
Descriptive statistics

and 150 employees. The ages of the companies varied from three to more than a hundred years, with an average of about 19 years.

The distributions of the two dimensions of EO were normally distributed with a mean value close to the midpoint of the scale. The average risk-taking propensity was slightly lower than the mean value of innovativeness and proactiveness. The perceived impacts of the economic downturn at the time of the study were highest in terms of sales and profitability, followed by more aggressive competition and less favorable terms of payment. On the other hand, the respondents did not report many impacts on their financing opportunities or personnel. On average, the volume of the companies had increased from 2007 to 2008, but then decreased in 2009. The decrease was most dramatic in operating revenues as its average value in 2009 was 22 percent lower than the 2008 average. The number of employees and total assets decreased only 11 percent and 2.4 percent, respectively. The liquidity as measured by current ratio had increased throughout the three-year period. Both the profitability ratios had decreased since 2007, and the drop from 2008 to 2009 was greater than that from 2007 to 2008.

The first hypothesis concerned the effects of EO dimensions on financial performance. The results of multiple linear regressions with financial performance indicators as dependent variables are shown in Table IV. In these regression models we predict the financials of 2009 using the 2008 values as control variables and EO dimensions as independent variables. The models for the two volume indicators (operating revenue and total assets) give very similar results. The R^2 are above 0.80, the lagged financial indicator has a positive coefficient with a very large t -value, and the innovativeness/proactiveness dimension has a significant positive effect while risk-taking is not significant. Thus, the more innovative and proactive firms suffered less in terms of operations volume. The liquidity and profitability models are also significant but the R^2 are somewhat lower than in the volume models. The profitability and liquidity measures are largely dependent on the previous year's values, but to a notably lesser extent than the volume measures. Risk-taking has negative effects which are significant or close to significance. This means that the more risk-taking a company is, the more its liquidity and profitability decreased during the crisis.

| Independent variables | Parameter estimate b | SE of b | t -value | p -value |
|---|------------------------|----------------|-------------|------------|
| <i>Dependent variable: operating revenue 2009 (€ 1,000)</i> | | | | |
| Constant | -185.43 | 320.83 | -0.58 | 0.56 |
| Operating revenue 2008 | 0.64*** | 0.02 | 27.39 | <0.01 |
| Innovativeness-proactiveness | 153.33* | 92.08 | 1.67 | 0.09 |
| Risk taking | 24.86 | 85.42 | 0.29 | 0.77 |
| Model fit | $R^2 = 0.82$ | $F = 253.81$ | df = 3; 169 | $p = 0.00$ |
| <i>Dependent variable: total assets 2009 (€ 1,000)</i> | | | | |
| Constant | -290.00* | 172.66 | -1.68 | 0.09 |
| Total assets 2008 | 0.904*** | 0.02 | 54.69 | <0.01 |
| Innovativeness-proactiveness | 138.19*** | 50.31 | 2.75 | <0.01 |
| Risk taking | -47.79 | 46.52 | -1.03 | 0.31 |
| Model fit | $R^2 = 0.95$ | $F = 1,013.32$ | df = 3; 169 | $p < 0.01$ |
| <i>Dependent variable: current ratio 2009</i> | | | | |
| Constant | 1.56 | 1.93 | 0.81 | 0.42 |
| Current ratio 2008 | 1.53*** | 0.10 | 16.09 | <0.01 |
| Innovativeness-proactiveness | 0.15 | 0.57 | 0.27 | 0.79 |
| Risk taking | -0.94* | 0.52 | -1.81 | 0.07 |
| Model fit | $R^2 = 0.62$ | $F = 91.89$ | df = 3; 169 | $p < 0.01$ |
| <i>Dependent variable: profit margin 2009 (%)</i> | | | | |
| Constant | 9.01** | 3.67 | 2.43 | 0.02 |
| Profit margin 2008 | 0.46*** | 0.08 | 5.93 | <0.01 |
| Innovativeness-proactiveness | -0.32 | 1.06 | -0.31 | 0.76 |
| Risk taking | -2.10** | 0.96 | -2.18 | 0.03 |
| Model fit | $R^2 = 0.21$ | $F = 15.10$ | df = 3; 166 | $p < 0.01$ |
| <i>Dependent variable: return on total assets 2009 (%)</i> | | | | |
| Constant | 16.00** | 6.95 | 2.30 | 0.02 |
| ROA 2008 | 0.38*** | 0.08 | 4.52 | <0.01 |
| Innovativeness-proactiveness | -1.30 | 1.91 | -0.68 | 0.49 |
| Risk taking | -2.82 | 1.76 | -1.61 | 0.11 |
| Model fit | $R^2 = 0.150$ | $F = 9.87$ | df = 3; 168 | $p < 0.01$ |

Table IV.
Regression results for
financial performance

Notes: Significant at: * $p < 0.10$, ** $p < 0.05$ and *** $p < 0.01$; tolerance values for all independent variables > 0.78

In sum, *H1a* is partly supported as innovativeness/proactiveness has positive effects on revenues and assets, but no effect on profitability or liquidity. *H1b* is partly supported as risk-taking has no effect on revenues or assets, but has negative effects on liquidity and profitability.

According to Miller (2011) combining the dimensions of EO is warranted, especially when the components are correlating strongly, like in our case the components of innovativeness and proactiveness. On the other hand, some scholars (Knight, 1997; Antoncic and Hisrich, 2001; Lumpkin and Dess, 2001) have shown that sometimes the dimensions of EO are distinct concepts and need to be treated separately. As there is no solid consensus in the prevailing EO literature how the EO dimensions should be treated, therefore, as a robustness check, we also treated innovativeness and proactiveness as separate independent variables. The scale for innovativeness consisted of four items (Table I) and its reliability was good (Cronbach's $\alpha = 0.84$). The proactiveness scale was formed as an average of two items and the reliability was acceptable (Cronbach's $\alpha = 0.64$). The results (Table V, Model A) of this alternate model regarding the financial performance are very similar to the results presented here. In the alternate model innovativeness and proactiveness are highly correlated (tolerance values close to 0.50), which might cause collinearity problems with the parameter estimates. Hence, we also run the models by including only innovativeness or proactiveness (Table V, Models B and C). The results were highly similar to those obtained from the original model.

Our second hypothesis concerned the effects of the dimensions of EO on the perceived impact that the economic downturn had on the operations of the firms. The effects were tested with a series of multiple linear regression analyses. In each regression model the perceived impact acted as the dependent variable, the international percentage of total sales as a control variable and the two EO dimensions as independent variables. The results are shown in Table VI. For the overall impact of the economic downturn, the regression model is significant at the 5 percent level although the model only explains about 8 percent of the variance. International sales percentage is the most important predictor but risk-taking also has a positive coefficient significant at the 10 percent level. The findings imply that the more international and risk-taking a firm is, the harder the crisis has hit its operations. A closer examination of the six types of impacts reveals that the effect of internationalization is similar and statistically significant in all but financing impacts. The short- and long-term financing impacts are significantly predicted by risk-taking, rendering support for *H2b*, *H2a* is not supported as the innovativeness/proactiveness dimension of EO is not significantly related to any types of impacts on operations.

Also here with the impact on operation we have run an alternate model where we have treated all EO dimensions as separate independent variables. Again, the main findings of this alternate model remain similar to the results presented here. The only difference was when the operations variable related to personnel was used as dependent variable. When innovativeness and proactiveness were treated separately results (Table VII) show that a significant and negative parameter estimate for innovativeness. This means that the personnel in more innovative firms have been less affected by the crisis.

5. Conclusion

In our study we were able to demonstrate that small Finnish firms were affected by the global economic crisis during the years 2008 and 2009. The results of our research indicate that EO does matter to how small firms face sudden recessions. EO is generally assumed

| Independent variables | Model A ^a | | Model B ^b | | Model C ^b | |
|---|----------------------------------|-----------------------|------------------------------------|-----------------------|------------------------------------|-----------------------|
| | <i>b</i> (SE) | <i>t</i> (<i>p</i>) | <i>b</i> (SE) | <i>t</i> (<i>p</i>) | <i>b</i> (SE) | <i>t</i> (<i>p</i>) |
| <i>Dependent variable: operating revenue 2009 (€ 1,000)</i> | | | | | | |
| Constant | -169.73 | -0.50 | -115.92 | -0.39 | -132.80 | -0.39 |
| | 341.57 | 0.62 | 296.28 | 0.69 | 340.12 | 0.69 |
| Op rev 2008 | 0.64 | 26.86 | 0.63 | 27.32 | 0.64 | 27.18 |
| | 0.02 | <0.01 | 0.02 | <0.01 | 0.02 | <0.01 |
| Innovativeness | 114.08 | 1.10 | 134.41 | 1.64 | | |
| | 103.87 | 0.27 | 81.84 | 0.10 | | |
| Proactiveness | 35.95 | 0.32 | | | 111.78 | 1.26 |
| | 112.60 | 0.75 | | | 89.00 | 0.21 |
| Risk taking | 25.79 | 0.30 | 31.18 | 0.37 | 44.83 | 0.53 |
| | 85.91 | 0.764 | 84.00 | 0.711 | 84.19 | 0.59 |
| Model fit | $R^2 = 0.818$ $F = 189.27^{***}$ | | $R^2 = 0.818$ $F = 253.67^{***}$ | | $R^2 = 0.817$ $F = 251.65^{***}$ | |
| <i>Dependent variable: total assets 2009 (€ 1,000)</i> | | | | | | |
| Constant | -347.63 | -1.90 | -198.60 | -1.24 | -332.15 | -1.83 |
| | 182.63 | 0.059 | 160.67 | 0.218 | 181.49 | 0.06 |
| Tot assets 2008 | 0.91 | 53.84 | 0.90 | 54.07 | 0.91 | 55.00 |
| | 0.02 | <0.01 | 0.02 | <0.01 | 0.02 | <0.01 |
| Innovativeness | 47.15 | 0.83 | 106.69 | 2.36 | | |
| | 57.14 | 0.410 | 45.16 | 0.019 | | |
| Proactiveness | 103.22 | 1.69 | | | 134.46 | 2.8 |
| | 61.24 | 0.094 | | | 48.09 | <0.01 |
| Risk taking | -50.95 | -1.09 | -36.03 | -0.78 | -43.19 | -0.95 |
| | 46.63 | 0.276 | 46.04 | 0.43 | 45.63 | 0.34 |
| Model fit | $R^2 = 0.948$ $F = 759.97^{***}$ | | $R^2 = 0.947$ $F = 1,001.43^{***}$ | | $R^2 = 0.947$ $F = 1,014.98^{***}$ | |
| <i>Dependent variable: current ratio 2009</i> | | | | | | |
| Constant | 1.40 | 0.69 | 1.71 | 0.95 | 1.39 | 0.69 |
| | 2.03 | 0.49 | 1.81 | 0.34 | 2.00 | 0.49 |
| Current 2008 | 1.53 | 15.90 | 1.54 | 16.18 | 1.53 | 15.95 |
| | 0.10 | <0.01 | 0.10 | <0.01 | 0.10 | <0.01 |
| Innovativeness | -0.04 | -0.06 | 0.09 | 0.18 | | |
| | 0.63 | 0.95 | 0.50 | 0.85 | | |
| Proactiveness | 0.23 | 0.33 | | | 0.20 | 0.38 |
| | 0.68 | 0.73 | | | 0.54 | 0.70 |
| Risk taking | -0.95 | -1.82 | -0.92 | -1.79 | -0.96 | -1.88 |
| | 0.53 | 0.071 | 0.51 | 0.075 | 0.51 | 0.06 |
| Model fit | $R^2 = 0.620$ $F = 68.56^{***}$ | | $R^2 = 0.620$ $F = 91.86^{***}$ | | $R^2 = 0.620$ $F = 91.95^{***}$ | |
| <i>Dependent variable: profit margin 2009 (%)</i> | | | | | | |
| Constant | 7.98 | 2.08 | 9.37 | 2.75 | 7.43 | 1.96 |
| | 3.84 | 0.03 | 3.40 | <0.01 | 3.79 | 0.05 |
| Prof marg 2008 | 0.45 | 5.85 | 0.46 | 5.89 | 0.46 | 5.99 |
| | 0.08 | <0.01 | 0.08 | <0.01 | 0.08 | <0.01 |
| Innovativeness | -1.04 | -0.90 | -0.51 | -0.54 | | |
| | 1.16 | 0.36 | 0.94 | 0.587 | | |
| Proactiveness | 0.98 | 0.79 | | | 0.32 | 0.32 |
| | 1.25 | 0.433 | | | 1.01 | 0.75 |
| Risk taking | -2.18 | -2.25 | -2.02 | -2.14 | -2.36 | -2.51 |
| | 0.97 | 0.026 | 0.94 | 0.034 | 0.94 | 0.01 |
| Model fit | $R^2 = 0.218$ $F = 11.52^{***}$ | | $R^2 = 0.215$ $F = 15.18^{***}$ | | $R^2 = 0.214$ $F = 15.10^{***}$ | |

(continued)

Table V.
Regression results for
financial performance:
innovativeness and
proactiveness as separate
components

| Independent variables | Model A ^a | | Model B ^b | | Model C ^b | |
|--|--------------------------------|-----------------------|--------------------------------|-----------------------|--------------------------------|-----------------------|
| | <i>b</i> (SE) | <i>t</i> (<i>p</i>) | <i>b</i> (SE) | <i>t</i> (<i>p</i>) | <i>b</i> (SE) | <i>t</i> (<i>p</i>) |
| <i>Dependent variable: return on total assets 2009 (%)</i> | | | | | | |
| Constant | 15.12 7.23 | 2.09 0.038 | 15.86 6.48 | 2.45 0.015 | 14.20 7.12 | 1.99 0.05 |
| ROA 2008 | 0.38 0.08 | 4.49 <0.01 | 0.38 0.08 | 4.50 <0.01 | 0.39 0.08 | 4.63 <0.01 |
| Innovativeness | -1.62 2.13 | -0.76 0.44 | -1.32 1.70 | -0.78 0.43 | | |
| Proactiveness | 0.53 2.27 | 0.23 0.81 | | | -0.51 1.81 | -0.28 0.78 |
| Risk taking | -2.88 1.76 | -1.63 0.10 | -2.80 1.73 | -1.62 0.10 | -3.15 1.73 | -1.82 0.07 |
| Model fit | $R^2 = 0.151$ $F = 7.41^{***}$ | | $R^2 = 0.150$ $F = 9.92^{***}$ | | $R^2 = 0.148$ $F = 9.71^{***}$ | |

Notes: Model is significant at: ***0.01 level; ^atolerance values: innovativeness <0.53, proactiveness <0.54, other independent variables >0.77; ^btolerance values for all independent variables >0.80

Table V.

to be a behavioral phenomenon, with all SMEs along a continuum ranging from highly conservative to highly entrepreneurial (Swierczek and Ha, 2003). The positive influence of EO on firm performance has also been widely recognized. Lumpkin and Dess (2001) pointed out that two dimensions of EO affect firm performance differently. Similarly, in the current study we found that during recession dimensions of EO have an opposite influence on firms' financial performance. The effects of economic downturn are stronger on risk-taking firms than on other firms. This result seems logical because risk-taking firms operate in an uncertain environment and often finance the investments by borrowing and trying to utilize leverage. On the other hand, the innovativeness-proactiveness dimension of EO also has a positive effect on firms' performance during recession. This result also seems logical because innovativeness and proactiveness reflect an important means by which firms try to find new business opportunities mainly utilizing their own resources. Despite the risk-taking dimension of EO having a negative effect on firms' financial performance during recession it can be said that firms with higher EO survive better than firms with lower EO because of the smoothing effects of innovativeness and proactiveness dimensions during recession.

At the operational level our findings show that the overall impact of the recession is more detrimental to firms which are more risk-taking. Risk-taking firms tend to be in more trouble especially in operations related both to short and long-term financing. This may be because risk-taking firms may already be highly-leveraged before the recession and when the recession begins, rising interest rates along with decreasing sales can cause them financial distress.

The findings of this study have several implications. From a practical point of view, our results suggest that managers should be aware of the effects of EO on performance and firm's operations in different business cycles. Especially, managers should bear in mind, that actions such as venturing into the unknown, heavy borrowing, or committing large portions of corporate assets in uncertain environments may have detrimental consequences during economic downturns. Therefore, managers should be very considerate when making decisions about investments or ventures containing high risk. Although, on the other hand risk and return come often hand in hand. On the other hand,

| Independent variables | Parameter estimate <i>b</i> | SE of <i>b</i> | <i>t</i> -value | <i>p</i> -value |
|--|-----------------------------|----------------|-----------------|-----------------|
| <i>Dependent variable: overall impact</i> | | | | |
| Constant | 45.70*** | 4.20 | 10.89 | <0.01 |
| International sales % | 0.12*** | 0.04 | 3.21 | <0.01 |
| Innovativeness-proactiveness | -1.68 | 1.23 | -1.36 | 0.18 |
| Risk taking | 2.29** | 1.17 | 1.96 | 0.05 |
| Model fit | $R^2 = 0.08$ | $F = 5.03$ | df = 3; 178 | $p < 0.01$ |
| <i>Dependent variable: sales and profitability</i> | | | | |
| Constant | 3.52** | 0.34 | 10.33 | <0.01 |
| International sales % | 0.01** | 0.00 | 3.82 | <0.01 |
| Innovativeness-proactiveness | -0.05 | 0.10 | -0.49 | 0.63 |
| Risk taking | -0.04 | 0.10 | -0.39 | 0.70 |
| Model fit | $R^2 = 0.08$ | $F = 4.86$ | df = 3; 180 | $P < 0.01$ |
| <i>Dependent variable: short term financing</i> | | | | |
| Constant | 1.47*** | 0.30 | 4.85 | <0.01 |
| International sales % | -0.00 | 0.00 | -0.02 | 0.96 |
| Innovativeness-proactiveness | -0.16* | 0.09 | -1.82 | 0.07 |
| Risk taking | 0.28*** | 0.09 | 3.34 | <0.01 |
| Model fit | $R^2 = 0.06$ | $F = 3.77$ | df = 3; 178 | $p = 0.01$ |
| <i>Dependent variable: long term financing</i> | | | | |
| Constant | 1.69*** | 0.34 | 4.97 | <0.01 |
| International sales % | 0.00 | 0.00 | 1.32 | 0.19 |
| Innovativeness-proactiveness | -0.14 | 0.10 | -1.35 | 0.18 |
| Risk taking | 0.22** | 0.10 | 2.32 | 0.02 |
| Model fit | $R^2 = 0.04$ | $F = 2.53$ | df = 3; 177 | $p = 0.06$ |
| <i>Dependent variable: personnel</i> | | | | |
| Constant | 1.97*** | 0.45 | 4.38 | <0.01 |
| International sales % | 0.01*** | 0.00 | 2.71 | <0.01 |
| Innovativeness-proactiveness | -0.16 | 0.13 | -1.21 | 0.23 |
| Risk taking | 0.14 | 0.13 | 1.08 | 0.28 |
| Model fit | $R^2 = 0.05$ | $F = 3.02$ | df = 3; 178 | $p = 0.03$ |
| <i>Dependent variable: competition</i> | | | | |
| Constant | 2.58*** | 0.35 | 7.33 | <0.01 |
| International sales % | 0.01** | 0.00 | 2.23 | 0.03 |
| Innovativeness-proactiveness | 0.06 | 0.10 | 0.60 | 0.55 |
| Risk taking | 0.00 | 0.10 | 0.02 | 0.99 |
| Model fit | $R^2 = 0.03$ | $F = 2.04$ | df = 3; 180 | $p = 0.11$ |
| <i>Dependent variable: terms of payment</i> | | | | |
| Constant | 2.37*** | 0.32 | 7.31 | <0.01 |
| International sales % | 0.01** | 0.00 | 2.37 | 0.02 |
| Innovativeness-proactiveness | 0.06 | 0.10 | 0.62 | 0.54 |
| Risk taking | -0.03 | 0.09 | -0.28 | 0.78 |
| Model fit | $R^2 = 0.04$ | $F = 2.18$ | df = 3; 180 | $p = 0.09$ |

Table VI.Regression results for
impact on operations**Notes:** Significant at: * $p < 0.01$, ** $p < 0.05$ and *** $p < 0.01$; tolerance values for all independent
variables > 0.78

our study encourages managers to be as innovative and proactive as possible, while these attributes seem to enable firms to cope better with extremely harsh business conditions.

Our results have also implications apart from business managers. For policy-makers the empirical evidence of this study should remind the importance of endorsing entrepreneurship and creation of support programs and initiatives for

Table VII.Regression results for
personnel: innovativeness
and proactiveness as
separate components

| Independent variables | Model A ^a | | Model B ^b | | Model C ^b | |
|--------------------------------------|-------------------------------|-----------------------|-------------------------------|-----------------------|----------------------------|-----------------------|
| | <i>b</i> (SE) | <i>t</i> (<i>p</i>) | <i>b</i> (SE) | <i>t</i> (<i>p</i>) | <i>b</i> (SE) | <i>t</i> (<i>p</i>) |
| <i>Dependent variable: personnel</i> | | | | | | |
| Constant | 1.86 | 3.94 | 2.12 | 5.00 | 1.72 | 3.64 |
| | 0.47 | 0.000 | 0.42 | 0.000 | 0.47 | 0.000 |
| International sales % | 0.01 | 2.86 | 0.01 | 2.81 | 0.01 | 2.58 |
| | 0.00 | 0.005 | 0.00 | 0.006 | 0.00 | 0.011 |
| Innovativeness | - 0.33 | - 2.16 | - 0.21 | - 1.77 | NA | NA |
| | 0.15 | 0.032 | 0.12 | 0.079 | | |
| Proactiveness | 0.20 | 1.24 | NA | NA | - 0.02 | - 0.13 |
| | 0.16 | 0.216 | | | 0.12 | 0.899 |
| Risk taking | 0.11 | 0.86 | 0.13 | 1.07 | 0.05 | 0.40 |
| | 0.12 | 0.393 | 0.12 | 0.286 | 0.12 | 0.688 |
| Model fit | $R^2 = 0.064$ $F = 3.00^{**}$ | | $R^2 = 0.056$ $F = 3.47^{**}$ | | $R^2 = 0.039$ $F = 2.40^*$ | |

Notes: Model is significant at: *0.10 and ** 0.05 levels; ^atolerance values: innovativeness = 0.50, proactiveness = 0.52, other independent variables >0.79; ^btolerance values for all independent variables >0.81

innovations of SMEs. With these aforementioned actions it may be possible to reinforce the national economy to endure better the future's challenges.

This study has also implications for scholars as this study is demonstrating that the relationship between EO and firm performance is related to the type of performance measure. Therefore, it may be worthwhile to use only one dimension of performance at a time in analyses and avoid combining different performance measures into one single indicator. Since, the different performance dimensions may be contradictory and cancel each other out.

Every research has its limitations, our research has also some limitations. A longitudinal design – rather than the current cross-sectional design – would give us a better premiss to explore the causal relationships among the research variables. Repeating our survey in the future will mitigate this problem.

In our study the financial measures are based on the financial statements of 2008 and 2009. The global economic downturn began in autumn 2008. The first effects of downturn are apparent in financial statements of 2009. Thus, in this study we were able to investigate only how firms faced the recession.

For the future, the EO-framework and our dataset still offer a wide set of possible research subjects. One of our future research interests is in how firms will survive the recession in the years to come and whether EO also contributes to/affects survival. It would be also worthwhile to test with these same small companies if the role of EO is different in benign time period compared to the recessionary time period used as an examination period in this study. Furthermore, testing the role of the EO within different line of businesses could be an interesting approach into this topic. Repeating the survey in the near future would yield an interesting longitudinal dataset. This kind of data offers a fruitful setting to investigate how the EO is evolving over time and to see if there are some factors which are cultivating and enhancing the level of the EO.

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What really happens to small and medium-sized enterprises in a global economic recession? UK evidence on sales and job dynamics

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Abstract

This article uses UK data to consider how small and medium-sized enterprises (SMEs)¹ coped during the recent financial crisis. This is important, as SMEs are major contributors to job creation, but are vulnerable to falling demand. It finds that 4 in 10 SMEs experienced a fall in employment during the recession, and 5 in 10 experienced a fall in sales. Within 12 months of the recession, three-quarters of entrepreneurs had a desire to grow. This suggests that while the immediate effects of recession are severe, entrepreneurs recover quite quickly. Importantly, the analysis found that recessionary growth is hugely concentrated among entrepreneurs with the highest human capital.

Keywords

financial crisis, job dynamics, sales dynamics, smaller firms

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Introduction

There has been limited attention from the academic community in examining its [the Great Recession of 2008] effect on entrepreneurial activity and the sustainability of the small business sector.
(Saradakis, 2012: 733)

The recent financial crisis, which began in September 2008, contributed to a fall of 6.4 percent in UK gross domestic product (GDP) in the subsequent six quarters and as such met the official definition of a recession. This represents the loss of three years of trend-level economic growth for the UK economy. At a time when larger businesses shed vast numbers of employees and unemployment rose by 674,000, policymakers increasingly looked to small and medium-sized enterprises (SMEs) to provide new employment opportunities and help drag the economy out of recession (Department for Business, Innovation and Skills, 2013), the implicit assumption being that: (a) SMEs are more flexible and resilient (Bednarszik, 2000; Binks and Jennings, 1986; Smallbone et al., 2012a, 2012b); (b) SMEs are more labour-intensive (Cowling, 2003; Robbins et al., 2000); and (c) that periods of disequilibrium create new opportunities for entrepreneurs (Parker et al., 2012; Schumpeter, 1942).

Yet even if we generally believe that SME's in the economy are more dynamic and opportunistic than large firms, SMEs are not immune to large contractions in the demand for goods and services. However, within the SME sector there is evidence that periods of disequilibrium and economic instability are also precisely the times when the some entrepreneurs are able to take advantage of new opportunities, as large firms and the public sector withdraw from markets (Acs and Storey, 2004; Grilli, 2011). This has been termed an entrepreneurial quality effect, that is separating the wheat from the chaff (Kitson, 1995). This occurs because in periods of economic growth more people are willing to pursue an entrepreneurial career path, but the marginal quality of the last entrepreneur declines. In recessions, however, low quality, marginal entrepreneurs exit the market.

It is the intention of this article to use a unique longitudinal dataset for the UK which spans the period leading up to the financial crisis in September 2008 and through the subsequent recession, in order to address four key questions.

RQ1: How many SMEs have still managed to grow in the current recession?

RQ2: Has the SME business sector been able to maintain its employment levels during the current recession?

RQ3: What types of entrepreneurs and SMEs have shown the capability to grow and create jobs during the current recession (i.e. is there an entrepreneurial human capital (EHC) effect)?

RQ4: Can SMEs provide the future growth that will create new employment opportunities as the economy emerges from recession?

In doing so, we hope to add to our understanding of what really happens to the SME sector during a severe economic downturn. This will enable us to speculate about the potential contribution of SMEs to future economic growth. This is of great importance, given the onus placed on the SMEs by politicians to provide new jobs and economic prosperity in the future. The results of this study also make a contribution to the future theoretical development of entrepreneurial growth models in periods of economic disequilibrium and turbulence.

The value-added of this article is fourfold. First, it uses a unique and contemporary dataset covering a full and severe, economic recession cycle. Second, it has multiple measures of actual growth and an additional future growth orientation variable. Previous empirical studies of growth have tended to use single performance measures. Delmar (1997), in an analysis of 55 growth studies, found that only 18.2 percent used more than one measure, and Unger et al. (2011), in a recent analysis of 70 growth studies, finding that the use of multiple growth measures had increased only marginally to 21.4 percent. Third, the dataset contains a rich set of entrepreneur and business-level characteristics, which allows us to broaden the theoretical and empirical scope of the analysis. Fourthly, the analysis is also able to test explicitly whether general relationships (for example, between EHC and growth) hold during a severe recessionary environment, or whether these relationships lose their effect.

The rest of the article is organised as follows. The next section reviews some of the key literature relating to the measurement of growth and its determinants. It also formulates the hypotheses. Following this, the data are presented and the key variables to be used in the analysis are discussed. The results of the empirical analyses are then presented, followed by exploration of the significance and relevance of the results of the study; with implications drawn for policymakers and practitioners. Finally, concluding remarks are provided.

Literature review and hypotheses

Small business growth: measurements and determinants

The growth literature has put too little emphasis on the measurement of growth (Delmar, 1997). Only recently has growth been treated as a multidimensional, heterogeneous and complex construct (Achtenhagen et al., 2010; Leitch and Neergard, 2010). This article uses multiple indicators to measure small business growth: namely, changes in employment and sales. The reasons for choosing employment and sales as growth measures are threefold. First, it is widely argued that small businesses make a positive contribution to economies mainly through employment and productivity (Acs and Storey, 2004; Audretsch et al., 2008; Cowling, 2006), making employment and sales two natural candidates and mostly used variables for growth measures (Achtenhagen et al., 2010; Delmar, 1997; Unger et al., 2011; Weinzimmer et al., 1998). Second, recent reviews of the small business growth literature found that previous studies tended to use single performance measures, and this approach often leads to results that are not comparable with each other (Achtenhagen et al., 2010; Delmar, 1997; Weinzimmer et al., 1998). Delmar suggests the use of multiple growth measures as they might 'best represent the theoretical concept of growth' (1997: 203). Third, as suggested in Achtenhagen et al. (2010), current entrepreneurship studies tend to 'simplify' growth outcomes to easily observable measures such as employee numbers, and ignore 'the multidimensionality and complexity of growth processes' (2010: 309), thus creating a gap between the growth defined and measured by academics or policymakers, and what is meaningful and relevant to entrepreneurs. However, this appears not to be so much of a concern in the present study, as when they were asked the question in the Annual Small Business Survey (ASBS), on which this research is based, more than four out of five entrepreneurs regard increasing turnover as means to achieve their longer-term growth plans. This means that the practical and policy implications derived from the empirical analyses in this article are meaningful and relevant to practitioners and policymakers.

After justifying the choice of growth measures, this article then draws on studies that have adopted a multivariate approach to examining the determinants of growth, from which the main hypotheses to be tested are developed, using multivariate regression analysis. Compared to large

firms, small businesses often lack the relevant resources and network capabilities to achieve growth (Storey, 1994). Facing this relative uncertainty, SMEs have a tendency to develop innovative products and services in order to sustain continuous evolution and change (Garengo et al., 2005). Therefore, the ability to undertake entrepreneurial activities is critical for small businesses' survival, growth and success. In this article, the level of entrepreneurship is linked with four broader categories of variables: business characteristics, entrepreneur characteristics and human capital, growth orientation and access to finance. However, as found in Cassar (2007), the growth achieved by SMEs can vary due to heterogeneous career reasons and the growth preferences of entrepreneurs, which are two areas not pursued in this study.

Business characteristics

Industry sector, age and size are three of the most common business characteristics to be linked with small business growth. Regarding industry, one might expect to observe an empirical relationship including economies of scale, barriers to growth, competition, overall market growth, etc. In line with the authors' *a priori* thinking, we note that in a majority of studies that have tested for any such effects, a significant industry effect is apparent. The most common sectors associated with higher growth rates are businesses services and manufacturing; and those associated with lower growth rates are personal household and other services. Reassuringly, this pattern holds across several countries (see Durand and Coeurderoy, 2001 for French evidence; Cooper et al., 1994 for US evidence; and Meager et al., 2004 for UK evidence).

In addition, the age of businesses can have an effect on realised growth. The literature on small business survival suggests that younger businesses in their formative years are more likely to be concerned with survival than growth if they do not fail within the first few years of starting up (Cowling, 2006). Therefore, growth should be observed in more matured businesses which have passed the 'survival mode' (Audretsch and Mahmood, 1994; Watson, 2012). Conversely, older firms may suffer from owners' lower commitment and involvement compared with young firms (Churchill and Lewis, 1983), so usually a firm's performance is found to be diminishing as the firm ages (Chandler and Hanks, 1993, 1994; Durand and Coeurderoy, 2001; Nunes et al., 2013).

Moreover, business size at start-up is an important variable included in a number of empirical studies. Although the famous Gibrat's Law (Gibrat, 1931) suggests no relation between size and growth, in the small business sector one might predict that size is an indicator of resource availability, both in financial and human capital terms, and in particular, the quality of the entrepreneur or entrepreneurial team. Also, bigger firms may enjoy greater economies of scale compared to smaller firms (Dass, 2000). As such, size should be associated with higher growth rates, which is confirmed by some empirical studies (e.g. Cowling et al., 2008; Sapienza and Grimm, 1997; Zhao et al., 2011). However, there is a trade-off between firm size and efficiency (Dean et al., 1998), which ultimately influences the firm's performance. According to this trade-off theory, small firms may have a tendency to remain small (Heshmati, 2000; Power and Reid, 2003).

From this review of the literature, it is clear that business characteristics play a significant part in determining the rate of growth of firms. In a recessionary economic environment we predict that these effects will be maintained, or even become more important in terms of magnitude and their ability to distinguish between growing, stable and declining firms. This might occur as external resources become scarcer during recessions, so firms are forced to rely on internal resources and strategic reserves. This leads to the first hypothesis:

H1: Business characteristics (age, size, sector, etc.) will impact on the rate of small business growth in both recessionary and non-recessionary periods.

Entrepreneur characteristics and human capital

The personal characteristics of entrepreneurs and their potential impact on small business growth performance are important considerations for both scholars and policymakers. This is particularly the case when there is perceived discrimination against certain groups of entrepreneurs such as women or minority ethnic groups. Perhaps the most interesting feature to note is that relatively few studies actually test for these effects; and the vast majority of studies that do are European. On gender, for example, only the US-based studies of Sapienza and Grimm (1997), which reports no gender effect, and Cooper et al. (1994), which finds a positive effect for males, explore the gender issue. In European studies, Cowling (2002) in a European Union (EU)-wide study finds a positive effect for males, which is in line with Bosma et al.'s (2002) Netherlands study and Bruderl and Preisendorfer's (1998) German study. Only Cowling (2003) finds a positive female effect for those using a publicly-funded business start-up programme in deprived areas of England.

Concerning other personal characteristics, the empirical evidence is significantly less voluminous. On ethnicity, for example, only Cooper et al. (1994) for the USA, and Cowling (2003) for deprived areas of England, find any ethnicity impacts. In both cases they identified a positive effect for white people. This contrasts with the UK-based study by Meager et al. (2004) of young people starting a business, which found no such effect. Again, there is a significant gap in our knowledge and understanding about the relative growth rates of minority ethnic businesses compared to white-owned businesses.

A survey of the recent literature on small business performance has shown that generally, human capital is positively linked to success (Unger et al., 2011). Cowling (2006) divided EHC into two categories: formal and informal. The former is proxied commonly by the entrepreneur's education level, and the latter usually by variables such as age, health, family and prior experience. In terms of formal human capital, there is fairly strong empirical support for the notion that businesses with more educated entrepreneurs experience faster early-stage growth (e.g. Cowling, 2002; Dimov and Shepherd, 2005; Rauch et al., 2005). Further, these studies cover a reasonable time span and different types of businesses, which might suggest that we can generalise with more confidence about this formal human capital effect.

However, empirical evidence on the impact of informal human capital is far less conclusive (Cowling, 2006). This probably is due to the fragmented measures of informal human capital used in the previous literature. For example, while there is virtually no evidence found between performance and the age of entrepreneur, some studies have found a positive relationship between experience and small business performance (Burke et al., 2000; Honig, 1998; Watson et al., 2003; Westhead et al., 2005; Zarutskie, 2010).

Again, this general review of the EHC literature shows that entrepreneur characteristics play a significant part in determining the rate of growth of firms. In a recessionary economic environment we predict that these effects will become relatively more important in terms of magnitude and their ability to distinguish between growing, stable and declining firms. This might occur as external resources become scarcer during recessions, so firms depend more on the skills and capabilities of the entrepreneur to manage through recession. This leads to the second hypothesis:

H2a: Entrepreneurial human capital (education, experience, etc.) will have a positive impact on the rate of small business growth.

H2b: The positive impact of EHC on the rate of small business growth will be magnified during a period of economic recession.

Growth orientations

The ambition to grow reflects the entrepreneur's propensity towards innovation, risk-taking and strategic proactiveness, which are all essential elements of entrepreneurial orientation (EO)² (Miller, 1983). EO provides the firm with a basis for entrepreneurial decisions and actions (Wiklund and Shepherd, 2003), and has been extensively studied in the entrepreneurship literature. Miller (1983) argued that firms may benefit from adopting an EO with uncertainties in the market, which requires that firms constantly seek out new opportunities. This is especially relevant for smaller businesses, given their obvious competitive disadvantage against larger firms in terms of resources or network.

In an analysis of 51 empirical studies on EO, Rauch et al. (2009) found a positive correlation between EO and firm performance, especially for micro businesses. While most studies on EO are focused on developed countries, especially the USA, often the same relationship is not found in emerging economies (e.g. Tang et al., 2008; Wang, 2008). This leads to the argument that the positive effect of EO is subject to constraints faced by firms operating in different contexts (Lumpkin and Dess, 2001; Tang et al., 2008). For example, Zhao et al. (2011) considered organisational learning as a possible intervening variable between EO and performance for a sample of Chinese enterprises, and found that there is a learning process before firms with EO start to grow.

While achieved growth is, in part, a reflection of entrepreneurs' willingness to act on the opportunities identified, in a recessionary environment, when the flow of potential opportunities diminishes, even entrepreneurs with a willingness to seek growth may be constrained by a lack of feasible opportunities and resources. Thus we predict that the generally positive effect of EO will be moderated during periods of economic recession. This leads to the third hypothesis:

H3a: There is a positive relationship between growth orientation and small business growth.

H3b: The positive growth orientation effect on small business growth will diminish during a period of recession.

Access to finance

The availability of credit to entrepreneurs with good investment opportunities is one of the key drivers of economic growth and competition (Beck and Demircuc-Kunt, 2006; Cassar, 2007; Marlow and Patton, 2005). It is widely recognised, however, that entrepreneurial activity and the growth of small businesses can be constrained by limited access to financial resources arising from imperfections in capital market allocations (e.g. Cooper et al., 1994; Honig, 1998; Marlow and Patton, 2005; Revest and Sapio, 2012; Westhead and Storey, 1997).

Small firm access to finance is linked directly to capital structure and the types of financing used, which in turn are found to be associated with firm and entrepreneur characteristics (Cassar, 2004; Cassar and Holmes, 2003). Other studies also link financial capital to human capital. Chandler and Hanks (1998) suggested that human and financial capital may be substitutes for each other. Their analysis showed that firms with either high levels of founder human capital or high levels of financial capital perform similarly, with firms having high levels of both. Conversely, Brinckmann et al. (2011) shifted attention from supply-side to demand-side, and argued that the financial management competence of a firm's founding team can help overcome the resource

restrictions of new firms and foster their growth. However, their empirical results are mixed. They found a more significant role of finance-seeking (external and internal finance) skills than strategic financial management skills on new venture growth.

While the availability of finance is generally important to support the development of new investment opportunities at the firm level, we predict that during an economic recession with credit rationing at the heart of it, firms that are able to successfully secure finance will achieve greater relative growth than would be the case in a more stable economic environment. This is in part because relatively few firms are able to secure finance, and hence only these firms are able to take advantage of any remaining opportunities for growth. This leads to the fourth hypothesis:

H4a: Small business growth is positively associated with the availability of finance.

H4b: This positive availability of finance effect on small business growth will be magnified during a period of recession.

Macroeconomic conditions

Undoubtedly, economic downturn and unfavourable financial market conditions affect the operation and survival of firms. Given the economic importance and vulnerability of small businesses, a better understanding of how adverse macroeconomic conditions influence entrepreneurial activities is crucial to effective crisis management by small businesses (Herbane, 2010).

Several studies have indicated that the relationship between small business survival or growth and its common determinants can be undermined during economic downturns (e.g. Hilmerston, 2013). Since the outset of the current financial crisis, there have been some timely studies investigating the impact that one of the severest recessions in modern history has had on SMEs (e.g. Cowling et al., 2012; Smallbone et al., 2012a). Generally speaking, there are two contradicting views, in the sense that recession either influences small business sector negatively, or has no effect (a summary of recent studies on the recession–performance relationship can be found in Table 1). Regarding the first view, it is argued that SMEs are more vulnerable to economic downturns because their comparative disadvantage against larger firms is likely to be exaggerated during a recession. Factors influencing SME performance during a recession include access to resources, especially the availability of finance (Cowling et al., 2012), and bargaining power with external stakeholders such as suppliers and customers. Empirical studies have found that during an economic recession, small businesses are likely to perform less well, and eventually their chance of survival will be reduced (Fotopoulos and Louri, 2000; Smallbone et al., 1999, 2012a; Storey, 1994). In contrast, the rationale behind the ‘SME immune to economic downturn’ view is that SMEs are more flexible in adjusting resource inputs, processes, prices and products (Reid, 2007), and therefore are more likely to pursue growth-oriented strategies (Latham, 2009). Moreover, it is argued that the decision and outcome of growth for entrepreneurial firms could lie within the entrepreneur level (Westhead and Wright, 2011; Wright and Stiliani, 2012), or even be modelled as a random process (Coad et al., 2013), which may be less affected by macroeconomic conditions. For example, Requena-Silvente (2005) find that SMEs base their export decisions on ‘typical’ export behaviour, which is not affected by economic recessions.

Recent studies have shown that recessions are more likely to hit SMEs in certain sectors (Bank of England, 2010; Office for National Statistics, 2011) or with certain characteristics, while other SMEs are more resilient (Kitching et al., 2009, 2011; Smallbone et al., 2012a, 2012b). For example, Kitching et al. note that the current credit crunch affects UK small businesses in various ways,

Table 1. Summary of recent studies on the performance–recession relationship.

| Study | Sample used | Main conclusion(s) |
|---|---------------------------------------|---|
| Bank of England (2010); Office for National Statistics (2011) | UK private business: 2008–2010 | Construction sector more depressed than other sectors such as business services |
| Coad et al. (2013) | UK (private bank data): 2004–2010 | Firm growth follows random patterns Growth paths influence survival |
| Grilli (2011) | Italian start-ups: 1995–2000 | Established start-ups with more experienced entrepreneurs are less likely to survive during negative industrial shocks |
| Hilmersson (2013) | Swedish SMEs: 2007–2011 | The scope and speed of internationalisation has a positive performance effect during market turbulence, but not the scale |
| Kitching et al. (2009, 2011); Smallbone et al. (2012b) | UK small businesses: 2009–2011 | SME performance varies within- and post-recession, dependent on firms' adaptations to the recession |
| Smallbone et al. (2012a) | UK and New Zealand SMEs: 2008–2009 | Recession has no constantly negative effect on firm survival Businesses showing performance resilience to the recession vary with regard to firm characteristics |
| Wright and Stigliani (2012) | Theoretical | Entrepreneurial cognition helps to shape the patterns and types of growth Entrepreneurs' role in shaping growth should be better understood, besides commonly considered factors such as access to finance |

and that 'all small businesses necessarily suffer during periods of generalised credit restrictions must be rejected' (2009: 16). Grilli (2011) found that established start-up firms with more experienced entrepreneurs are actually less likely to survive during negative industrial shocks. Grilli's argument is that more experienced entrepreneurs have a wider range of career options, so they may voluntarily exit the market during an industry crisis when the opportunities to stay are too high. Therefore, the bottom line is that there are certain kind of smaller businesses that are more likely grow during adverse market shocks.

Method

Sample

This study is intended to analyse existing data from two previous survey sources which cover information on small businesses in the pre-recession and recessionary periods, respectively. The pre-recession data is derived from the ASBS in 2007/08. The ASBS has been conducted on an annual basis³ since 2003, and the 2007/08 survey involved a large-scale telephone survey conducted by IFF Research Ltd between November 2007 and March 2008 to monitor key trends in the characteristics and perceptions of small business owners and managers. The main purpose of the survey is to gauge the needs and concerns of small businesses, and to identify the barriers which

prevent them from fulfilling their potential. A total of 9362 SMEs (businesses with fewer than 250 employees) were interviewed using a stratified random sample selection method evenly across 13 regions in the UK, and the samples were randomly drawn from across all commercial sectors of the economy. Among the pre-recession sample SMEs, 45 percent are micro enterprises (0–9 employees), 38 percent are small enterprises (10–49 employees) and 17 percent are medium-sized enterprises (50–249 employees).

Conducted by the UK Department for Business, Innovation and Skills, a sample of the SMEs entering the 2007/08 ASBS were re-contacted in a series of Business Barometer surveys in order to determine how well or badly they had performed in the previous year, and to assess their levels of business confidence going forward. On average 500 SMEs were re-surveyed using questions similar to the 2007/08 ASBS in each of the seven Business Barometer waves, starting from December 2008 to February 2010 with intervals of two to three months. Therefore, the survey period coincides with the latest financial crisis and gives us the opportunity to investigate how business attitudes and access to finance by UK SME change pre- and post-recession. The matching of the 2007/08 ASBS and Business Barometer surveys yields a dataset of 3506 SMEs. The composition of within-recession sample SMEs is fairly similar to the pre-recession sample, with 44 percent being micro enterprises, 33 percent small enterprises and 23 percent medium-sized enterprises.

Dependent variables

Two measures of performance are used in this study: percentage changes in employment (*EGROWTH*) and sales (*SGROWTH*). In both surveys, questions were asked explicitly on the firm's current number of employees and turnover, as well as the performance the year before. Pre-recession growth is calculated as the percentage change in employment and sales between the 2007/08 ASBS and the previous year. Within-recession growth is calculated as the percentage change in employment and sales between the Business Barometer surveys and the 2007/08 ASBS. In both cases, the performance variables are winsorised at the 1 percent level to remove the effect of outliers.

In addition to exploring recent actual performance, this study seeks to understand the future growth aspirations of SMEs going forward. In order to measure growth orientation, both sets of surveys asked business owners whether or not they aimed to grow their firms over the next two to three years. Accordingly, in this study, growth orientations (*ORIENTATION*) is defined as a binary variable (equalling 1 if the answer to the above question is a 'yes', 0 otherwise).

Explanatory variables

The independent variables in this study can be classified into four groups: business characteristics, owner/entrepreneur characteristics, access to finance and recessionary time indicators. The main business characteristics include firm size, age, sector, region, structure, sector, and so on. Firm size is measured by employee numbers (*EMP*). Business age is reported in the dataset as banded variables (up to 10 years, 11–20 years and more than 20 years, labelled as *AGE_10LESS*, *AGE_11TO20* and *AGE_20MORE*, respectively). Variables on corporate structure include whether or not a business is family owned (*FAMOWN*) or incorporated (*CORP*).

Owner/entrepreneur characteristics measure the firm's human capital, and consist of owner age (*OAGE*), gender (whether or not the business is women-led, *WLED*), ethnicity (whether or not the business is minority ethnic group-led, *MLED*), prior experience and level of education. An experienced employer (*EXP*) is defined as having set up previously a business, charity or been

self-employed. The level of education (*DEGREE*) is measured by whether or not the owner has a university degree or higher.

Both the 2007/08 ASBS and the Business Barometer asked whether a firm had applied for finance during the last 12 months and, if so, the outcome of the application. Based on the outcomes of financing applications, a firm is defined as ‘fully constrained’ if its application was denied (*NOACCESS*), and as ‘partly constrained’ if it only obtained some, but not all, of the finance required (*PARTACCESS*). The base category is firms either with no need for external finance, or those that have obtained all the finance required successfully (*FULLACCESS*). Lastly, seven recessionary time indicators (*WAVE1* to *WAVE7*) are defined to match the timing of the seven Business Barometer surveys covering the entire duration of the economic recession.

Empirical methodologies

The primary objective of this study is to investigate the recessionary growth performance of SMEs and the determinants of growth outcomes. Since both growth measures (percentage change in employment and sales) are continuous variables, an ordinary least squares (OLS) model specification allowing for clusters effect is used, with adjustments made for robustness of the standard errors. In this way, the analysis is able to capture the possible unobservable group effects (e.g. within sectors) in the dataset. Further, the study also examines entrepreneurs’ growth intention going forward. In doing this, it uses probit regression models, since the dependent variable is binary and coded 1 if the entrepreneur has an explicit growth orientation for the future, and 0 otherwise. The model uses maximum likelihood estimations and the model chi-square and log likelihood are reported to test the model’s goodness of fit.

Results

This section first reports sample descriptive statistics for the variables, then the empirical results from multivariate regression analysis.

Descriptive statistics

Table 2 reports the descriptive statistics of dependent and independent variables. There are 3067 firm-level observations for the analysis of SME performance during the recession, whereas the sample size for pre-recession analysis from the 2007/08 ASBS is 6597.⁴ Since most of the variables are dummy variables, it is worth noting that the mean of each dummy is equivalent to the percentage of observations where the variable takes a value of 1.

From the 2007/08 ASBS data, the average employment and sales growth are 2.6 percent and 5.2 percent, respectively. The average absolute change of sales is £87,050, and the average employment change is 1.3. In addition, more than 70 percent of smaller firms had an explicit growth ambition. During the current recession, while employment actually has grown by a higher rate (3.3%), the average turnover has decreased by almost 9 percent, which translates to an average decrease in sales of £113,000. Figures 1 and 2 illustrate how the proportions of respondents reporting sales and/or employment increase and intention to grow in the future have changed over time before and during the recession (between September 2008 and February 2010). It can be seen that both employment and sales performance is significantly lower compared to pre-recession levels, while the growth ambition of small businesses has picked up as the recession approached its end.

Table 2. Variable definition and sample descriptive statistics.

| Variable | Definition | (1) Pre-recession (N = 6597) | | | (2) Within-recession (N = 3067) | | | (1) vs. (2) | |
|----------------------------------|---|---------------------------------|-------|---------|------------------------------------|-------|-------|-------------|--------|
| | | Mean | S.D. | Min | Max | Mean | S.D. | Min | Max |
| <i>Dependent variables</i> | | | | | | | | | |
| EGROWTH | % change in employee numbers over the past 12 months | 2.55 | 29.67 | −100.00 | 150.00 | 3.34 | 60.66 | −95.56 | 336.36 |
| SGROWTH | % change in sales over the past 12 months | 5.24 | 18.77 | −50.00 | 100.00 | −8.86 | 25.58 | −100.00 | 33.33 |
| ORIENTATION | Firm aiming to grow in the next two to three years (0, 1) | 0.73 | 0.45 | 0.00 | 1.00 | 0.71 | 0.45 | 0.00 | 1.00 |
| <i>Independent variables</i> | | | | | | | | | |
| <i>Business characteristics:</i> | | | | | | | | | |
| EMP | Number of employees | 25.58 | 37.57 | 0.00 | 249.00 | 31.99 | 44.38 | 0.00 | 240.00 |
| AGE_10LESS | Firm less than 10 years old (0, 1) | 0.04 | 0.42 | 0.00 | 1.00 | 0.07 | 0.27 | 0.00 | 1.00 |
| AGE_11TO20 | Firm between 11 and 20 years old (0, 1) | 0.21 | 0.41 | 0.00 | 1.00 | 0.39 | 0.49 | 0.00 | 1.00 |
| AGE_20MORE | Firm more than 20 years old (0, 1) | 0.75 | 0.43 | 0.00 | 1.00 | 0.54 | 0.50 | 0.00 | 1.00 |
| CORP | Firm is incorporated (0, 1) | 0.81 | 0.39 | 0.00 | 1.00 | 0.87 | 0.34 | 0.00 | 1.00 |
| FAMOWN | Firm is family-owned (0, 1) | 0.64 | 0.48 | 0.00 | 1.00 | 0.62 | 0.47 | 0.00 | 1.00 |
| EXPORTER | Firm exports (0, 1) | 0.29 | 0.45 | 0.00 | 1.00 | 0.29 | 0.45 | 0.00 | 1.00 |
| Primary industries | Sector dummy (0,1) | 0.02 | 0.16 | 0.00 | 1.00 | 0.03 | 0.18 | 0.00 | 1.00 |
| Metals manufacturing | Sector dummy (0,1) | 0.10 | 0.29 | 0.00 | 1.00 | 0.15 | 0.36 | 0.00 | 1.00 |
| Non-metals manufacturing | Sector dummy (0,1) | 0.04 | 0.19 | 0.00 | 1.00 | 0.05 | 0.23 | 0.00 | 1.00 |
| Other manufacturing | Sector dummy (0,1) | 0.10 | 0.30 | 0.00 | 1.00 | 0.13 | 0.34 | 0.00 | 1.00 |
| Construction | Sector dummy (0,1) | 0.33 | 0.47 | 0.00 | 1.00 | 0.25 | 0.43 | 0.00 | 1.00 |
| Retail and wholesale | Sector dummy (0,1) | 0.07 | 0.25 | 0.00 | 1.00 | 0.06 | 0.24 | 0.00 | 1.00 |
| Transport and communication | Sector dummy (0,1) | 0.21 | 0.41 | 0.00 | 1.00 | 0.20 | 0.40 | 0.00 | 1.00 |
| Business services | Sector dummy (0,1) | 0.04 | 0.19 | 0.00 | 1.00 | 0.05 | 0.21 | 0.00 | 1.00 |
| Other services | Sector dummy (0,1) | 0.07 | 0.25 | 0.00 | 1.00 | 0.05 | 0.21 | 0.00 | 1.00 |
| <i>(Continued)</i> | | | | | | | | | |

(Continued)

Table 2. (Continued)

| Variable | Definition | (1) Pre-recession (N = 6597) | | | (2) Within-recession (N = 3067) | | | (1) vs. (2) | |
|-------------------------------------|--|---------------------------------|-------|-------|------------------------------------|-------|------|-------------|----------|
| | | Mean | S.D. | Min | Max | Mean | S.D. | Min | Max |
| Owner/entrepreneur characteristics: | | | | | | | | | |
| OAGE | Owner's age | 50.39 | 10.41 | 19.00 | 88.00 | 51.55 | 9.74 | 21.00 | 87.50 |
| WLED | Women-led business (0, 1) | 0.60 | 0.86 | 0.00 | 3.00 | 0.10 | 0.29 | 0.00 | 1.00 |
| MLED | Minority ethnic-led business (0, 1) | 0.57 | 0.88 | 0.00 | 3.00 | 0.04 | 0.20 | 0.00 | 1.00 * |
| EXP | Employer with prior experience (0, 1) | 0.04 | 0.18 | 0.00 | 1.00 | 0.18 | 0.39 | 0.00 | 1.00 |
| DEGREE | Employer with university degree or higher (0, 1) | 0.41 | 0.49 | 0.00 | 1.00 | 0.45 | 0.50 | 0.00 | 1.00 |
| Access to finance: | | | | | | | | | |
| FULLACCESS | Poor firm-bank relationship (0, 1) | 0.96 | 0.22 | 0.00 | 1.00 | 0.92 | 0.28 | 0.00 | 1.00 ** |
| NOACCESS | Firm-bank relationship neither good nor poor (0, 1) | 0.01 | 0.08 | 0.00 | 1.00 | 0.07 | 0.26 | 0.00 | 1.00 *** |
| PARTACCESS | Good firm-bank relationship (0, 1) | 0.02 | 0.13 | 0.00 | 1.00 | 0.01 | 0.10 | 0.00 | 1.00 * |
| Recessionary time indicators: | | | | | | | | | |
| WAVE1 – WAVE7 | Dec 08, Feb 09, April 09, Jun 09, Sep 09, Dec 09, Feb 10 Barometer Survey firms (0, 1), respectively | | | | | | | | |

* $p < .10$; ** $p < .05$; *** $p < .01$ for univariate comparison test of difference in means.

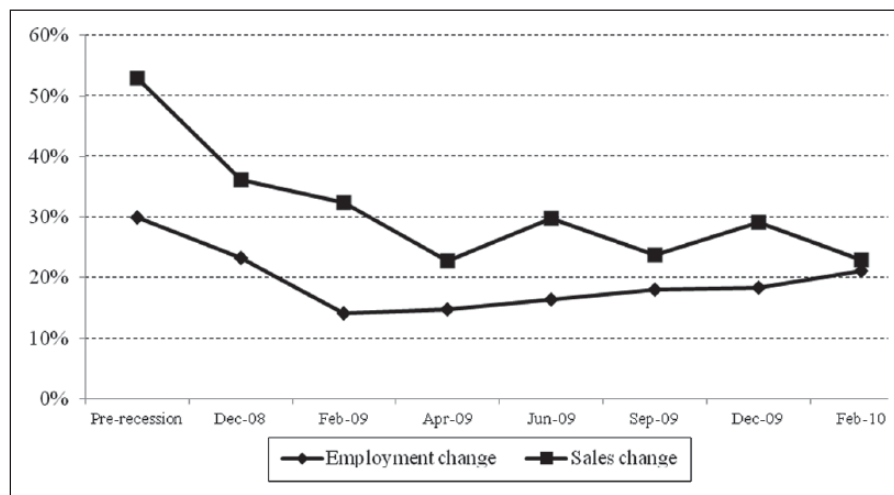


Figure 1. Proportion of business with increased sales and employment before and during the recession

*Base: All SME employers (weighted data); unweighted $N = 2396$ (pre-recession $N = 2138$).

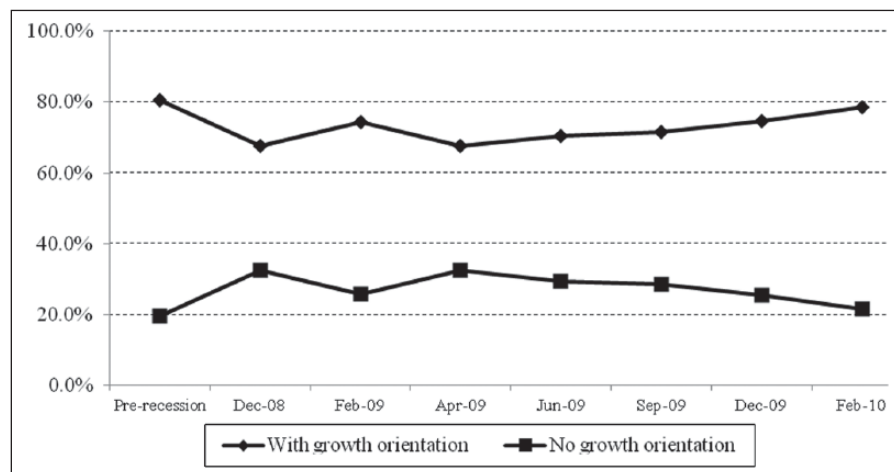


Figure 2. Proportion of business with a growth orientation before and during the recession

*Base: All SME employers (weighted data); unweighted $N = 2396$ (pre-recession $N = 2138$).

Table 1 also presents the univariate mean-comparison test results for firms before and during the latest financial crisis. It is shown that, compared to pre-recession periods, firms during the recession generally have lower growth ambitions and are more likely to be financially constrained.

Multivariate regression results

The starting point was to model econometrically the dynamics of business sales and employment growth before and during the period of economic recession. As the study is particularly interested

Table 3. OLS regressions: pre- and within-recession employment and sales growth.

| | Employment growth | | | | Sales growth | | | |
|--------------------------|----------------------|----------------------|-----------------------|-----------------------|----------------------|----------------------|-----------------------|-----------------------|
| | Pre-recession | | Within-recession | | Pre-recession | | Within-recession | |
| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 | Model 7 | Model 8 |
| EMP | 0.150*** (0.025) | 0.141*** (0.025) | 0.203*** (0.026) | 0.201*** (0.026) | 0.030*** (0.006) | 0.021*** (0.006) | 0.084*** (0.028) | 0.076*** (0.028) |
| EMP ² | -0.001*** (0.000) | -0.001*** (0.000) | | | | | -0.000 (0.000) | -0.000 (0.000) |
| AGE_11TO20 | -4.119** (1.978) | -3.942** (1.977) | -8.351* (4.366) | -8.399* (4.370) | -4.852*** (1.240) | -4.394*** (1.229) | -4.532*** (1.824) | -4.505*** (1.822) |
| AGE_20MORE | -8.346*** (1.911) | -8.096*** (1.912) | -14.847*** (4.374) | -14.981*** (4.391) | -8.648*** (1.193) | -7.962*** (1.184) | -3.103* (1.835) | -3.056* (1.838) |
| SGROWTH | 0.444*** (0.019) | 0.432*** (0.019) | 0.300*** (0.043) | 0.295*** (0.043) | | | | |
| EGROWTH | | | | | 0.175*** (0.007) | 0.167*** (0.007) | 0.053*** (0.008) | 0.052*** (0.008) |
| CORP | -0.473 (0.948) | -0.670 (0.949) | -7.482** (3.350) | -7.693** (3.355) | 2.302*** (0.585) | 1.775*** (0.582) | -0.616 (1.411) | -0.860 (1.410) |
| FAMOWN | 0.312 (0.774) | 0.385 (0.774) | 3.612 (2.414) | 3.899 (2.424) | 0.159 (0.485) | 0.360 (0.482) | -1.249 (1.011) | -0.954 (1.013) |
| EXPORTER | 1.732*** (0.823) | 1.562* (0.826) | -0.934 (2.640) | -1.156 (2.661) | 2.786*** (0.515) | 2.305*** (0.513) | 5.434*** (1.100) | 5.067*** (1.107) |
| Primary industries | -1.332 (3.224) | -1.695 (3.223) | -11.459 (9.124) | -11.155 (9.131) | -3.186 (2.020) | -3.917* (2.003) | -6.972* (3.814) | -6.764* (3.808) |
| Metals manufacturing | -0.678 (2.595) | -0.779 (2.594) | -15.289** (7.411) | -15.041** (7.415) | -0.805 (1.627) | -1.009 (1.613) | -13.632*** (3.091) | -13.392*** (3.086) |
| Non-metals manufacturing | 1.285 (2.900) | 1.069 (2.897) | -8.947 (8.209) | -8.689 (8.215) | -1.960 (1.817) | -2.364 (1.801) | -11.503*** (3.425) | -11.255*** (3.420) |

(Continued)

Table 3. (Continued)

| | Employment growth | | | | Sales growth | | | |
|------------------------------------|----------------------|----------------------|---------------------|---------------------|----------------------|----------------------|----------------------|----------------------|
| | Pre-recession | | Within-recession | | Pre-recession | | Within-recession | |
| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 | Model 7 | Model 8 |
| <i>Other manufacturing</i> | 0.536 (2.595) | 0.512 (2.593) | -11.865 (7.444) | -11.620 (7.451) | -0.730 (1.628) | -0.672 (1.613) | -9.039*** (3.109) | -8.722*** (3.105) |
| <i>Construction</i> | 0.172 (2.428) | 0.100 (2.426) | -14.000* (7.155) | -13.695* (7.161) | -2.727* (1.522) | -2.820* (1.509) | -3.682 (2.992) | -3.448 (2.988) |
| <i>Retail and wholesale</i> | 3.274 (2.697) | 3.163 (2.695) | -5.888 (8.095) | -5.638 (8.099) | -2.644 (1.691) | -2.755 (1.676) | -7.359** (3.382) | -7.148** (3.376) |
| <i>Transport and communication</i> | 2.067 (2.501) | 1.893 (2.500) | -11.798 (7.343) | -11.790 (7.347) | -1.462 (1.569) | -1.773 (1.555) | -9.168*** (3.066) | -9.194*** (3.061) |
| <i>Business services</i> | 1.313 (2.979) | 1.588 (2.980) | -9.039 (8.670) | -8.780 (8.673) | -4.704** (1.867) | -4.542** (1.852) | 0.176 (3.627) | 0.498 (3.620) |
| <i>Other services</i> | -1.665 (2.750) | -1.585 (2.748) | -1.886 (8.606) | -1.459 (8.612) | -2.880* (1.724) | -2.746 (1.709) | -1.228 (3.596) | -0.807 (3.591) |
| <i>OAGE</i> | -0.164*** (0.035) | -0.147*** (0.035) | -0.089 (0.115) | -0.078 (0.115) | -0.094*** (0.022) | -0.058*** (0.022) | -0.007 (0.048) | 0.008 (0.048) |
| <i>WLED</i> | -0.021 (0.919) | -0.032 (0.918) | 0.710 (3.741) | 0.726 (3.742) | 0.502 (0.576) | 0.447 (0.571) | -0.897 (1.565) | -0.866 (1.562) |
| <i>MLED</i> | 1.489* (0.904) | 1.493* (0.903) | 2.653 (5.553) | 2.695 (5.555) | -0.221 (0.567) | -0.206 (0.562) | -1.204 (2.320) | -1.181 (2.316) |
| <i>EXP</i> | -1.472 (1.973) | -1.521 (1.971) | 1.704 (5.662) | 1.463 (5.665) | -0.252 (1.238) | -0.442 (1.227) | 0.863 (2.368) | 0.621 (2.363) |
| <i>DEGREE</i> | -0.894 (0.746) | -0.935 (0.746) | -2.263 (2.303) | -2.312 (2.306) | 1.210*** (0.467) | 1.032** (0.464) | -0.573 (0.964) | -0.656 (0.963) |
| <i>ORIENTATION</i> | | 2.575*** (0.831) | | 2.240 (2.506) | | 5.302*** (0.512) | | 3.037*** (1.046) |

(Continued)

Table 3. (Continued)

| | Employment growth | | | Sales growth | | |
|-------------------------|-------------------|---------------------|-------------------|--------------------|---------------|----------------------|
| | Pre-recession | | Within-recession | | Pre-recession | |
| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
| PARTACCESS | | -7.964* (4.575) | | -8.645 (10.473) | | -5.373* (2.847) |
| NOACCESS | | -5.759** (2.591) | | -4.788 (4.155) | | -6.844*** (1.611) |
| WAVE2 | | | 0.351 (4.011) | 0.358 (4.021) | | -0.648 (1.676) |
| WAVE3 | | | -1.513 (4.025) | -1.676 (4.030) | | -2.553 (1.682) |
| WAVE4 | | | 0.072 (4.034) | -0.044 (4.038) | | -2.569 (1.686) |
| WAVE5 | | | 2.553 (4.049) | 2.445 (4.055) | | -4.605*** (1.690) |
| WAVE6 | | | 3.596 (4.041) | 3.307 (4.046) | | -2.627 (1.688) |
| WAVE7 | | | 5.140 (6.632) | 5.061 (6.636) | | -5.454** (2.771) |
| N | 6597 | 6597 | 3067 | 3067 | 6597 | 6597 |
| Adjusted R ² | 0.112 | 0.113 | 0.041 | 0.041 | 0.125 | 0.142 |
| F-statistics | 25.358*** | 23.812*** | 4.523*** | 4.251*** | 29.653*** | 31.211*** |
| | | | | | 5.976*** | 5.960*** |

* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$. Asymptotic robust standard errors are reported in parentheses.

in how performance changes when the economy moves into recession, it estimates separate pre-recession and within recession models.

Table 3 reports the coefficient estimates for both sales and employment growth equations. The first two specifications show the pre-recession employment growth. It can be seen that larger SMEs are more likely to experience employment growth ($\beta = 0.15, p < 0.01$), but the negative coefficient on the quadratic term indicates that there is a diminishing effect on the relationship between size and employment growth. Here, employment ceases to grow when the firm has more than 120 employees,⁵ showing a diseconomy of scale. Younger firms or firms with younger owners are more likely to have their employment number increased. This analysis includes sales growth (employment growth in sales growth equation) as a control variable and finds it significantly and positively correlated with employment change ($\beta = 0.44, p < 0.01$). Businesses that export their products and/or are led by minority ethnic owners are more likely to have experienced increased employment in non-recessionary times. The analysis also includes further controls for entrepreneurial growth orientation and access to finance in Model 2. On average, growth-oriented businesses' employment grow by 2.6 percent more than the rest of the firms, and compared to those with full access to finance, businesses with partial or no access to finance have suffered from a lower employment growth rate by 8 percent and 5.8 percent, respectively.

Employment growth during the recession shows some remarkable differences (Models 3 and 4). It is only the business characteristics variables that are significant in explaining employment growth during a recessionary period. Similar to non-recessionary periods, larger ($\beta = 0.20, p < 0.01$) but younger firms with higher sales growth ($\beta = 0.30, p < 0.01$) exhibit greater capabilities to weather economic downturn than the other firms. The employment number of the whole small business sector seems not to be significantly affected by the financial crisis: although firms were not able to grow their employment size for the whole duration of the recession, there is no sign of a decrease in employment either. As predicted, the coefficient estimate for growth orientation is insignificant. However, the study could not find any significant evidence on the effect of financial constraints on employment growth.

The rest of Table 3 reports the coefficient estimates for SMEs' sales performance before (Models 5 and 6) and during the recession (Models 7 and 8). Similarly, the pre-recession growth in sales is positively related to the size of the firm, and negatively related to firm age. Business that export outside the UK outperform those that do not export by at least 2.3 percent in terms of sales growth. The growth ambition of firms has even a larger effect on sales than employment growth. Compared to businesses with no growth ambitions, growth-oriented businesses outperformed the other firms by more than 5 percent. Again, it is found that financial constraints reduce sales growth.

Similar to recessionary employment growth, larger but younger firms are more likely to experience sales growth. Positive employment growth also tends to create a multiplier effect on sales growth during the recession ($\beta = 0.05, p < 0.01$). There is still no significant impact of human capital variables on recessionary sales growth. A clear time dynamic is identified, where sales performance continued to deteriorate during the recession, even towards the end of the crisis. As shown in Model 8, growth orientation in a recessionary period has a positive effect on sales growth ($\beta = 3.04, p < 0.01$). Moreover, businesses that failed to get any funding from their lenders were associated with a decline in sales by 3.2 percent, although the effect is even larger for those with only partial access to finance ($\beta = 9.78, p < 0.01$).

The final models estimate the probability that an entrepreneur will have a growth orientation. For ease of interpretation this article reports the marginal effects which show the probability that an entrepreneur or business with a specific characteristic will be more (or less) likely to have a growth orientation. A common set of variables identified in the previous growth models are used. The coefficient estimates for these growth orientation models are reported in Table 4.

Table 4. Probit regressions: pre- and within-recession growth orientations.

| | Pre-recession | | Within-recession | |
|-------------------------------------|----------------------|----------------------|----------------------|----------------------|
| | Model 1 | Model 2 | Model 3 | Model 4 |
| <i>Business characteristics:</i> | | | | |
| EMP | 0.002*** (0.000) | 0.002*** (0.000) | 0.001*** (0.000) | 0.001*** (0.000) |
| AGE_11TO20 | -0.094** (0.038) | -0.092** (0.038) | -0.052 (0.036) | -0.051 (0.036) |
| AGE_20MORE | -0.128*** (0.028) | -0.126*** (0.028) | -0.115*** (0.034) | -0.112*** (0.034) |
| EGROWTH | 0.001*** (0.000) | 0.001*** (0.000) | 0.000 (0.000) | 0.000 (0.000) |
| SGROWTH | 0.004*** (0.000) | 0.004*** (0.000) | 0.001*** (0.000) | 0.001*** (0.000) |
| CORP | 0.080*** (0.015) | 0.080*** (0.015) | 0.061** (0.026) | 0.061** (0.026) |
| FAMOWN | -0.045*** (0.012) | -0.044*** (0.012) | -0.074*** (0.018) | -0.075*** (0.018) |
| EXPORTER | 0.108*** (0.012) | 0.107*** (0.012) | 0.139*** (0.018) | 0.138*** (0.018) |
| <i>Owner characteristics:</i> | | | | |
| OAGE | -0.007*** (0.001) | -0.007*** (0.001) | -0.004*** (0.001) | -0.004*** (0.001) |
| WLED | 0.011 (0.014) | 0.011 (0.014) | -0.022 (0.028) | -0.022 (0.028) |
| MLED | 0.002 (0.014) | 0.002 (0.014) | 0.027 (0.041) | 0.026 (0.041) |
| EXP | 0.047 (0.030) | 0.046 (0.030) | 0.060 (0.042) | 0.062 (0.042) |
| DEGREE | 0.036*** (0.012) | 0.035*** (0.012) | 0.044** (0.018) | 0.044** (0.018) |
| <i>Access to finance:</i> | | | | |
| NOACCESS | | 0.098* (0.059) | | 0.022 (0.077) |
| PARTACCESS | | 0.082** (0.034) | | 0.046 (0.030) |
| <i>Recessionary time indicator:</i> | | | | |
| WAVE2 | | | 0.082*** (0.026) | 0.080*** (0.026) |
| WAVE3 | | | 0.067** (0.027) | 0.067** (0.027) |
| WAVE4 | | | 0.069** (0.027) | 0.068** (0.027) |
| WAVE5 | | | 0.078*** (0.027) | 0.077*** (0.027) |
| WAVE6 | | | 0.075*** (0.027) | 0.075*** (0.027) |

(Continued)

Table 4. (Continued)

| | Pre-recession | | Within-recession | |
|-----------------------|---------------|-----------|------------------|------------------|
| | Model 1 | Model 2 | Model 3 | Model 4 |
| WAVE7 | | | 0.072 (0.047) | 0.071 (0.047) |
| N | 6597 | 6597 | 3067 | 3067 |
| Pseudo R ² | 0.129 | 0.130 | 0.098 | 0.099 |
| χ^2 | 997.336 | 1004.022 | 361.466 | 363.660 |
| Log likelihood | -3367.664 | -3364.321 | -1663.886 | -1662.789 |

* $p < .10$; ** $p < .05$; *** $p < .01$. Marginal effects of the coefficient estimates are reported. Asymptotic robust standard errors are reported in the parentheses.

Table 5. Summary of hypotheses and empirical results.

| Hypotheses | Prediction | Result |
|---------------------------------|---------------------------------|-----------------|
| H1: Business Characteristics | More important during recession | Yes |
| H2: Entrepreneurs Human Capital | More important during recession | No |
| H3: Entrepreneurial Orientation | Less important during recession | Yes (partially) |
| H4: Access to Finance | More important during recession | Yes (partially) |

The UK small business sector has maintained its growth ambition during the recession, and SMEs' intention to grow in the future is not hindered by the actual employment performance of the firm, or even the shortage of financial resources. Moreover, there is a significant feedback effect from sales growth to growth orientation ($\beta = 0.001$, $p < 0.01$). The analysis finds considerable similarities regarding the types of entrepreneurs and smaller firms that are growth-orientated before and during the recession. First, larger SMEs but younger firms are more ambitious on future growth. Second, businesses that are structured as formal corporations and/or are involved in exporting are more likely to seek future growth, while family-owned businesses are less ambitious. Third, key indicators of entrepreneur ability, especially education, have a positive and significant effect on businesses' growth orientations. Finally, entrepreneurs' personal characteristics have a less pronounced effect on growth ambitions except for the age of the owner, which shows that younger entrepreneurs are more likely to seek future growth. Regarding the dynamics of SME owners' growth intentions during the recession, growth ambitions are more likely to be found at the start of the recession, and as market conditions worsened during the recession, entrepreneurs simply became more realistic about future growth until the crisis approached its end.

Discussion

The summary results are presented in Table 5. First, the analysis finds that the business characteristics important in predicting pre-recession SME growth performance (e.g. size and age), are also important determinants of within-recession performance. Moreover, consistent with H1, additional predictors of within-recession performance have been discovered, such as sector effects. Second, contrary to business characteristics, EHC variables have little predictive power for both employment and sales growth during the recession. Thus, H2 is not supported. Third, partial support is

found for H3, in the sense that the positive effect of entrepreneurial growth orientation on actual SME growth disappears when looking at the employment performance during the recession. Similarly, H4 is only partially supported, as better access to finance is crucial to achieving recessionary growth in sales, but not employment.

In terms of the question as to how many SMEs are capable of achieving growth during the recession, we note that between 20 percent and 30 percent grew their sales, which is less than the 50 percent that grew in more favourable economic conditions prior to the recession. Equally, between 15 percent and 20 percent of firms grew their employment during the recession, but again this is lower than in the pre-recession period, when 30 percent grew their employment. This suggests that the recession had a strong adverse effect – at least in the first six months – on firms' ability to grow. From this, and explicitly focusing on the second research question concerning employment growth, we note that more firms were creating jobs as the recession continued, even when fewer firms were managing to grow their sales. This might suggest that after an initial downward employment correction as the recession unfolded, in general SMEs were able to recover quite quickly, as an increasing number of firms were willing to hire employees. To this end, it could be argued that SMEs are indeed more resilient and more capable of creating jobs as the economy slowly moves out of recession.

In terms of what types of firms and entrepreneurs were more likely to grow during a recession, we note that firms in all manufacturing sectors experienced significant declines in sales and firms in construction were most likely to experience declines in employment. Taken together, these results show that industry sector is an important determinant of growth outcomes during a recession. Moreover, the importance of this feature of economic growth is heightened by the fact that in periods of economic growth, industry sector plays a very minor role in the determination of employment and sales growth, which is distributed fairly randomly across all industry sectors.

Other firm characteristics were found to be important in determining growth. Taken together, these results show that business characteristics are important determinants of growth in both recessionary and non-recessionary periods. However, that this is not the case for EHC. During the recession, it is access to financial resources, rather than more subjective measures of human capital, that are important determinants of recessionary growth, especially regarding sales. This suggests that in more stable economic environments, many more SMEs are able to take advantage of general growth in demand without having to compete vigorously with other firms and entrepreneurs. Nevertheless, during a recession, when the whole small business sector is constrained further by limited resources, only the entrepreneurs that have access to essential financial resources can manage to achieve growth. Yet it is also the case that willingness to seek growth was found to be a positive attribute in more stable economic conditions, although this relationship did not hold in a recessionary environment. This might suggest that exogenous forces, notably declining demand and reduced investment activity, overwhelm these generally positive effects.

As this global economic recession has its roots in the financial sector, these findings show that credit constraints at the firm level will inhibit a firm's ability to grow its sales, thus creating a negative multiplier effect. The effect of capital availability on business performance, especially sales, is consistent with the traditional view that entrepreneurial activity and the growth of small businesses can be seriously constrained by limited access to financial resources (Auerswald and Branscomb, 2003; Revest and Sapio, 2012). However, this also could mean that firms refused any finance by lenders are indeed of poorer quality and less creditworthy (Nightingale et al., 2009), leading to their inferior performance. Importantly, the results show that credit rationing in recessions leads to a more substantial reduction in growth performance than was the case in the pre-recessionary period. This suggests that capital constraints magnify performance differences between firms, and

can lead to lower growth rates in the small business sector than would have been achieved otherwise. Generally, SMEs were not able to increase their sales during the recession, especially during the later periods of the recession, when average sales decreased by £60,000 to £200,000. This has significant potential policy implications for governments seeking to promote growth and job creation amongst SMEs.

Further, we note that under any economic conditions there is a positive synergy between sales and employment growth. This positive relationship is diminished only slightly in terms of its effect size during recessions. What this does suggest is that any policy levers that stimulate either job growth or sales growth will be more likely to create a positive economic multiplier.

In relation to the fourth and final research question relating to future growth orientations, there are several important insights. First, general growth orientations do decline during a recession, with 10 percent fewer firms reporting these intentions, but this depressing effect begins to recover within six months of the onset of the recession. In terms of which types of firms and entrepreneurs have growth orientations, the analysis finds that firm size has a positive effect, and firm age a negative effect. Family businesses were less likely to be growth-orientated, but exporting firms more likely to be. In relation to entrepreneur effects, the study finds that younger entrepreneurs and those with a university education are more likely to be growth-orientated during a recession. Taken together, these findings suggest that certain types of entrepreneurs and firms tend to view recession as a time to scale down their activities and try and weather the economic storm, whereas others see recession as an opportunity to gear up their firms for future growth.

Conclusion

This article has sought to examine the effect of the 2008 recession on SMEs in the UK. To summarise the overall findings of this study, the authors are drawn to the conclusion that recessions do take their toll on SMEs, but these effects appear to be relatively shortlived in general, and affect specific types of small businesses and entrepreneurs more than others. However, perhaps the most significant finding is that in a stable and growing macroeconomic environment, growth is spread more randomly across all types of firms and entrepreneurs. This is not true in periods of economic downturn, when only specific SMEs, in terms of larger size and better access to finance, are able to grow.

For policymakers the results suggest that helping SMEs to access finance may create a positive growth multiplier, and many countries have adopted this policy position. More importantly, any policy levers that stimulate jobs, or general spending in the economy, will help create a positive jobs–growth multiplier. As for the general capability of the SME sector to grow and help drag depressed economies forward, the findings do offer some support for the contention that SMEs are more resilient and flexible to cope with the disequilibrium caused by economic recession.

In terms of potentially interesting avenues of future research, it would be helpful to establish the timescale over which any policy interventions in the small business sector take to manifest themselves in measurably better growth outcomes. Equally, the question of how long it takes for growth orientations to translate themselves into actual growth is important. Moreover, since there is clear evidence of a feedback effect from actual growth (in sales) to growth orientation, further investigation of the interrelationship between growth performance and growth orientation in a longitudinal context would be worthy. Finally, having broadly established that entrepreneurial quality is a fundamental determinant of growth during recessions, the question of how strong an economy has to be before good and bad entrepreneurs are capable of surviving and growing is hugely interesting and important.

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Notes

1. We use the term SME and small firm interchangeably in this article
2. We have to stress that our measure of growth orientation is just a very general indication of whether the business aim to grow or not. Therefore, it may not be put into direct comparison with the more itemised and systematic measures of EO in the previous literature.
3. After 2008, the survey has been conducted biennially.
4. We also try to match the pre- and within-recession samples and do the same analysis for the matched sample as a robustness check. However, this does not alter the empirical findings significantly, but has increased the value of error terms due to the considerable decrease in sample size.
5. The number is derived by calculating the turning point of the employment growth function, as the absolute value of the ratio between the coefficient estimate of *EMP*, divided by two times the coefficient estimate of *EMP*².

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The association among project manager's leadership style, teamwork and project success

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Abstract

This study aims to examine whether the impact of teamwork on project performance was moderated by the following data class variables: industry sector, total installed cost, owner regulation, initial site, team size, complexity, project type, and international involvement. Additionally, this study also investigated the relationships among the project manager's leadership style, teamwork, and project success. To address the primary aims, a questionnaire-based survey was used to measure the project manager's leadership style, teamwork, and project success in terms of schedule performance, cost performance, quality performance, and stakeholder satisfaction. The analyses suggest that increases in levels of leadership may enhance relationships among team members. The results also indicate that teamwork exhibits statistically significant influence on project performance. Finally, the findings suggest that project type has a moderating effect on the relationship between teamwork dimensions and overall project success.

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Keywords: Leadership; Teamwork; Project performance; Project type

1. Introduction

In order to respond rapidly to market needs and increase profits, the best companies are constantly searching for proven practices that offer a competitive advantage. These companies generally avoid practices that do not provide some proven added value. Several studies have shown that the role of a project manager is critical to project success. However, the literature on project success factors has largely ignored the impact of a project manager and his or her leadership style on project success (Turner and Muller, 2005). Even though some practices have been adopted and others abandoned, however, no empirical study has been done on the associations between project leadership style and teamwork. In addition, there has been no comprehensive industry-wide study on the impact of teamwork on project outcomes. This lack of information regarding leadership benefits along with uncertain competitive

advantage from teamwork has resulted in a manager's reluctance to adopt different leadership styles.

Some project managers develop a particular leadership style in an attempt to achieve the goals of a project. These project managers are also examining teamwork for ways to improve project success. However, since the benefits of leadership behaviors can be rather intangible, this has slowed or prevented the implementation of leadership theories. Accordingly, the impact of leadership behaviors on project performance has been one of the major issues for both industry and academic fields (Keller, 1992; Kendra and Taplin, 2004; Turner and Muller, 2005). In order to understand the benefits, there is a need for quantification of the benefits derived from leadership behaviors. Research on leadership behaviors and their associations with project performance should offer tangible evidence of advantages from adopting a certain leadership style. Although researchers in a number of disciplines outside of construction have suggested that leadership style is becoming increasingly critical to project success, there is limited research in the construction context (Giritli and Civan, 2008; Sunindijo et al., 2007; Ozorovskaja et al., 2007; Chinowsky

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et al., 2007). There is a need for more comprehensive empirical evidence that evaluates the benefits associated with the project manager's leadership style and, more specifically, its associations with teamwork and project performance.

This study attempts to fill this void of empirical evidence by identifying the associations between leadership style, teamwork, and project success. The purpose of this research is three-fold. The first objective of this study was to investigate the effect of the project manager's leadership style on teamwork. The second objective was to assess the impact of teamwork on project success. The third objective was to examine the moderating role of project type in the relationship between teamwork and project performance. Moderating variable is a second independent variable that is included because it is believed to have a significant contributory or contingent effect on the originally stated independent variable–dependent variable relationship (Cooper and Schindler, 2008). The research attempts to determine whether project type would moderate the relationship between teamwork and project success. In other words, the analysis shows the relationship between teamwork and project success for different types of projects. Additionally, the analyses of the project manager's leadership style and relationships with teamwork and project performance are based on an industry-wide survey performed between May and August 2008. A data collection tool was developed to assess the project manager's leadership style, teamwork, and the performance of projects in the Taiwanese construction industry.

2. Literature review and research hypotheses

The development of leadership results in various definitions. DuBrin (2004) stated that leadership is the accomplishment of goals through communication towards others. Leadership is dynamic, which is the ability to influence groups for purposes of goal accomplishment (Koontz and Wehrich, 1990). Concerning the factors which may influence leadership, Goleman (2004) claimed that emotional intelligence may be the key attribute that distinguishes outstanding performers from those who are merely adequate. Five components associated with emotional intelligence were found in this study: self-awareness, self-regulation, motivation, empathy, and social skill. Ivancevich et al. (1977) distinguished the specialties of leaders with six categories: physiological characteristics, social background, intelligence, personality related to work, and social interpersonal. Stogdill (1948) categorized the leader's specialty into five categories: ability, achievement, responsibility, participation, and position. Davis (1972) identified four kinds of personalities related to succeeding in leadership: social maturity and breadth, inner motivation and achievement drive, intelligence and human relations, and attitudes. Fiedler (1967) believed that effective leaders should cooperate with situational factor. Fiedler (1974) proposed three kinds of situation parameters in relation to leadership styles. Additionally, Hersey and Blanchard (1972) proposed life cycle theory of leadership and then developed contingency leadership. They argued that leadership style should depend on different maturity phases of a relationship. Above prior studies indicated that empathy plays an important role in leadership. Salovey and Mayer

(1990) defined empathy as the ability to comprehend another's feelings and re-experience them. They found that empathy may be a central characteristic to emotionally intelligent behavior. Kellett et al. (2002) stated that empathy is an important predictor of leadership emergence. The study concluded that perception of leadership skill is impacted by leader emotional ability through empathy. In summary, leaders are affected by their mental abilities, emotional abilities, and ability to perform complex tasks. Additionally, leadership style should depend on circumstances.

A considerable body of research conducted on leadership stresses the importance of leadership style. Six schools of leadership have evolved over the past several decades. The visionary school discovered two types of leadership, transactional and transformational leadership. Bass and Avolio (1990) identified different components of the two types of leadership. However, transactional leadership is often contrasted with transformational leadership. Transactional leadership emphasizes contingent rewards. The transactional leader rewards subordinates for meeting performance objectives. As such, the transactional leadership style presents traditional views on leadership, which focuses on the contractual agreement between the leader and the subordinate on expected performance in return for certain rewards (Thite, 2001). Furthermore, the leader–follower relationship is reduced to the simple exchange of a certain quality of work for an adequate price (Wang et al., 2005). The leaders take action when assignments are not proceeding as planned. Previous research indicated that the cost–benefit exchange process would only result in ordinary outcomes.

Unlike the transactional leaders who indicate how current needs of subordinates can be satisfied, transformational leaders show charisma and create pride, respect, trust, and a vision. Transformational leadership provides inspiration and intellectual stimulation, motivates followers by creating high expectations and modeling appropriate behaviors, and challenges follows with new ideas and approaches (Bass, 1990). Transformational leaders pay attention to the concerns of individual team members. Bass (1985) contended that today's environment requires that subordinates perform beyond ordinary expectations and that is deliverable by transformational leadership. Leaders with a transformational style are seen as more effective by subordinates and superiors (Fiol et al., 1999; Lowe et al., 1996). Keller (1992) found that transformational leadership may be a predictor of project performance. Keegan and Den Hartog (2004) forecasted that transformational leadership would be more suitable for project managers but found no significant link. Furthermore, some research investigated the interaction of the project manager's leadership style with project type. Muller and Turner (2007) concluded that different leadership styles are appropriate for different types of projects. Higgs and Dulewicz (2004) found a preference for transformational leadership style on complex change projects and a preference for transactional leadership style on simple projects. Additionally, Frame (1987) and Turner (1999) suggested that different leadership styles are appropriate at different phases of the project life cycle. In summary, the literature suggested that transactional and transformational leadership styles may be effective styles for project managers.

While the above authors investigated the behavior of leaders, other researchers have also been active in exploring the impact of the manager's leadership on the performance of organizations and companies. Prior studies indicated a correlation between the manager's leadership style and successful performance in business. While the relationships between leadership behavior and performance in business have received substantial attention, the number of studies dealing with the leadership style of project managers and its contribution to project success is rather scarce. Morris (1988) found that poor leadership is a failure factor during formation, build-up, and close-out phases. Kendra and Taplin (2004) cited that the leadership and personal characteristics of the project managers are associated with project success factors. However, many of the previous studies asked project managers their opinion, and it would seem that many project managers do not recognize themselves or their leadership style as a contributor to project success (Turner and Muller, 2005). In summary, a large body of literature has attempted to identify project success factors. However, prior studies have ignored the project managers or their leadership styles as project success factors.

The above studies provided valuable knowledge regarding leadership behavior. In addition to the literature on leadership behavior, some focused on discussion of the relationships between leadership style and teamwork in terms of team communication, collaboration, and cohesiveness. Communication is a process for disseminating information to other team members (Lussier, 2003). Team communication can be thought of as the extent to which members exchange thoughts and opinions with others to complete the mission (Campion et al., 1993). Bass and Avolio (1994) argued that team communication is probably influenced by leadership style. Additionally, Yammarino et al. (1998) suggested that leadership may increase team communication. On the other hand, collaboration is also critical to group environment. Collaboration consists of working together with one or more others, especially in a joint intellectual effort. Collaboration can improve relationships between team members (Nelson and Coopridge, 1996). Podsakoff et al. (1990) stated that leadership may contribute to team cooperation. Team collaboration may be also impacted by leadership style (Shamir et al., 2000). Finally, team cohesiveness can be thought of as the extent to which team members feel a part of the team and desire to remain in the team (Wang et al., 2005). Cohesiveness is the glue that binds the team members together as a unit. Dionne et al. (2004) contended that leadership may increase team cohesiveness. Leadership style can improve team relationships and strengthen team cohesion (Perry et al., 1999; Prati et al., 2003).

Earlier studies supported the notion that adopting transactional and transformational leadership styles is beneficial. A review of the literature suggests that the adoption of leadership as a means to enhance teamwork has been supported. As such, leadership is a highly influential factor in teamwork. As indicated by the review of literature, leader's behaviors may be positively related to teamwork in terms of team communication, collaboration, and cohesiveness (Wang et al., 2005; Bass, 1990; Zaccaro et al., 2001). Based on leadership theory and the

previous studies, the following research hypothesis was developed:

H1. The project manager's leadership and teamwork (in terms of team communication, collaboration, and cohesiveness) are correlated.

The relationships between teamwork and team performance have also been studied. The results of previous studies indicated a correlation between teamwork (including team communication, collaboration, and cohesiveness) and team performance. Solomom (2001) indicated that communication plays a critical role in team operations. Team communication may result in uniformity of team members and make the team more effective. In previous research, team communication was found to be associated with a critical determinant of team performance (Kotlarsky and Oshri, 2005; Thamain, 2004). In addition, Gladstein (1984) stressed that team collaboration is a highly influential factor in team performance. Effective team performance may derive from successful collaboration between team members (Jassawalla and Sashittal, 1999; Kotlarsky and Oshri, 2005). Finally, Levine and Moreland (1990) indicated that cohesiveness plays a critical role in team. They concluded that teams can be made more successful by strengthening their cohesion. Cohesiveness is also critical to team environment. Highly cohesive teams can force members to comply with group positions (Thibaut, 1950). Team cohesiveness can also improve uniformity of team members (Lott and Lott, 1965). Thus, effective team performance may derive from successful team cohesiveness (McGrath, 1964).

In summary, teamwork has been identified as factors influencing team performance. Many other studies indicated that teamwork in terms of team communication, collaboration, and cohesiveness plays an important role in team performance (Trist, 1981; Jewell and Reitz, 1981; Gladstein, 1984; Schwarz, 1994). The results of previous studies indicated a correlation between teamwork and team performance. This study extends previous research by addressing the impact of teamwork on project performance. Based on the relevant literature, the following hypothesis was postulated and tested:

H2. Teamwork (including team communication, collaboration, and cohesiveness) and overall project success are correlated.

Above prior studies indicated that teamwork plays an important role in team performance. Teams can be made more successful by improving their interaction and cohesiveness. As such, effective team performance may derive from team communication, collaboration, and cohesiveness (Morris, 1988; Kendra and Taplin, 2004). Additionally, several researchers have stated that project type may play a moderating role in the relationship between practice use and project success (Muller and Turner, 2007; Yang et al., 2006). Based on the empirical research on teamwork, particularly in relation with team performance, the following hypothesis is proposed:

H3. Project type may act as a moderator between teamwork and overall project success.

3. Methodology

3.1. Data collection tool

Based on the aforementioned theories and studies, the research model is presented in Fig. 1. A survey instrument was used to measure the project manager's leadership style, teamwork, and performance on projects in the Taiwanese construction industry. The data obtained and analyzed in this study are project-specific, meaning the data are representative of the levels of leadership and teamwork on projects (rather than organization-wide). As such, the data collection tool collected project-based information across organizational boundaries. The data collection tool was developed based on variables used in previous studies (Bass and Avolio, 1990; Thite, 2001; Podsakoff et al., 1990; Tjosvold, 1988; Campion et al., 1993; Wang et al., 2005; Henry et al., 1999; Muller and Turner, 2007; Pinto and Slevin, 1988; Larson and Gobeli, 1988; Keller, 1994). Study participants were first asked to identify a recent project that they were familiar with for assessment. For the subject project, the survey then asked participants to assess the project manager's leadership style, teamwork, and final performance for that project. The survey was composed of four sections: 1) project manager's leadership style, 2) teamwork, 3) project performance, and 4) personal information. The first section assesses aspects of the project manager's leadership style, including transactional leadership and transformational leadership. The second section of the survey measures level of team communication, collaboration, and cohesiveness on the subject project. The third section evaluates project success in terms of schedule performance, cost performance, quality performance, and stakeholder satisfaction. The final section obtains information concerning the respondents and the project. These subject projects were categorized according to eight data class variables: industry sector, project size, owner regulation, initial site, team size, complexity, project typicality, and international involvement. These variables are defined as follows (O'Connor and Yang, 2004):

1. Industry sector — Buildings, industrial, or infrastructure.
2. Project size (total installed cost) — Three cost categories are presented: small size (i.e., <\$5 million), medium size (i.e., \$5–50 million), and large size (i.e., >\$50 million).
3. Owner regulation — This variable allowed researchers to distinguish private projects from public projects.
4. Initial site — Participants were provided with three optional responses: Greenfield (or new), renovation, or expansion.

5. Team size (number of core team member) — Three categories are presented: small team (i.e., <16 members), medium team (i.e., 16–45 members), and large team (i.e., >45 members).
6. Complexity — Respondents were asked to compare the subject project to other company projects relative to complexity. Three optional responses were provided: high, medium, and low.
7. Project typicality — Respondents were asked to compare the subject project to other company projects relative to construction methods and approaches. Two optional responses were provided: advanced or traditional.
8. International involvement — Respondents were asked to identify whether international organizations were involved in the subject project. Two optional responses were provided: international or local.

3.2. Sample selection and data collection

An industry-wide survey of project manager's leadership style, teamwork, and performance on capital facility projects was conducted in Taiwan between May and August 2008. The data collection tool was developed to collect project-based data. Project responses were collected through personal interviews. Individuals interested in participating in the study were identified by a search from various industry associations. The targeted respondents were identified as the senior individuals who were familiar with project manager's leadership style, teamwork, and project performance. In order to obtain a truly representative sample, not only was the geographic mix of projects intentionally diverse, but a diverse mix of participation was sought with respect to sector of industry. Additionally, a specified mix of project size was targeted in order to obtain a representative sample of the industry. More than 200 projects were investigated and some were not included in the analysis because they contained insufficient information. In addition, the projects were examined to ensure that no duplicate project information was collected. Ultimately, 213 survey responses were used in the analysis. Table 1 presents characteristics of sampled projects.

The sample's respondents consisted of project directors, project planners, and project superintendents. Project responses were collected through personal interviews rather than mail. This allows the interviewers to investigate project manager's leadership style and teamwork from the perspectives of various types of stakeholders. As such, project responses are based on personal interviews with a number of project members. Thus, some biases can be eliminated. This approach can also improve the objectivity of the ratings. With respect to age, 32.39% of the respondents are more than 40, 18.78% are between 36 and 40, 24.88% are between 31 and 35, 17.37% are between 26 and 30, and the remaining 1.88 are less than 26. Regarding years of experience, 8.45% are more than 20, 16.43% are between 16 and 20, 17.37% are between 11 and 15, 23.00% are between 6 and 10, and the remaining 28.17% are less than 6. Finally, 14.09% of the respondents indicated that they held a master's or Ph.D. degree, while another 38.97% held a bachelor's degree.

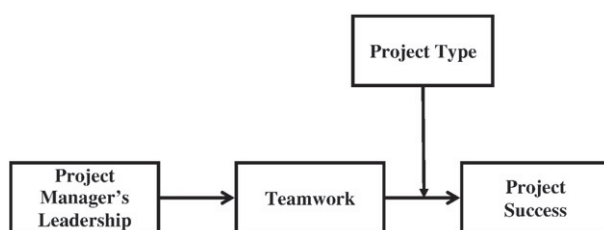


Fig. 1. Research model.

Table 1
Characteristics of sampled projects.

| Characteristic | Class | Number | Percent of projects |
|----------------------------|---------------------|--------|---------------------|
| Industry sector | Building | 50 | 23.47 |
| Industry sector | Industrial | 16 | 7.51 |
| Industry sector | Infrastructure | 140 | 65.73 |
| Industry sector | Not available | 7 | 3.29 |
| Total installed cost | <\$5 Million | 78 | 36.62 |
| Total installed cost | \$5–20 Million | 48 | 22.54 |
| Total installed cost | >\$20 Million | 38 | 17.84 |
| Total installed cost | Not available | 49 | 23.00 |
| Owner regulation | Private | 81 | 38.03 |
| Owner regulation | Public | 120 | 56.34 |
| Owner regulation | Not available | 12 | 5.63 |
| Initial site | Greenfield (or new) | 110 | 51.64 |
| Initial site | Renovation | 29 | 13.62 |
| Initial site | Expansion | 8 | 3.76 |
| Initial site | Not available | 66 | 30.99 |
| Number of core team member | More than 20 | 38 | 17.84 |
| Number of core team member | 10–20 | 45 | 21.13 |
| Number of core team member | Less than 10 | 83 | 38.97 |
| Number of core team member | Not available | 47 | 22.07 |
| Complexity | High | 35 | 16.43 |
| Complexity | Medium | 93 | 43.66 |
| Complexity | Low | 49 | 23.00 |
| Complexity | Not available | 36 | 16.90 |
| Project typicality | Advanced | 58 | 27.23 |
| Project typicality | Traditional | 134 | 62.91 |
| Project typicality | Not available | 21 | 9.86 |
| International involvement | International | 51 | 23.94 |
| International involvement | Local | 159 | 74.65 |
| International involvement | Not available | 3 | 1.41 |

Additionally, 35.68% of the respondents indicated that they held associate's degree. The remaining 9.39% held a high school diploma.

3.3. Measurement

The project manager's leadership style (independent variable) assessed includes transactional and transformational leadership. The items used to measure transactional leadership were based on the questionnaires developed by Bass and Avolio (1990) and Thite (2001). On the other hand, the scales developed by Podsakoff et al. (1990) were adapted to evaluate transformational leadership. A six-point response scale was used (from 1 = never to 6 = always) to measure the frequency of the transactional and transformational behavior.

Three subscales (team communication, team collaboration, and team cohesiveness) were used to measure teamwork (mediator variable). Items used to rate team communication and collaboration were based on the questionnaires developed by Tjosvold (1988) and Campion et al. (1993). Additionally, items used to rate team cohesiveness were based on the surveys developed by Wang et al. (2005) and Henry et al. (1999). Responses are given on 6-point scale, from 1 (strongly disagree) to 6 (strongly agree).

Finally, questions from Muller and Turner (2007), Pinto and Slevin (1988), Larson and Gobeli (1988), and Keller (1994) were adapted to measure project performance (dependent

variable). Four subscales (schedule performance, cost performance, quality performance, and stakeholder satisfaction) were used to evaluate project performance. Each item was rated on a 6-point scale, where 1 represented strongly disagree and 6 represented strongly agree.

3.4. Dealing with reliability and validity

Cronbach's coefficient (α) was computed to test the reliability and internal consistency of the responses. Reliability was assessed for leadership at 0.914, teamwork at 0.961, and project performance at 0.948. The values of Cronbach's α above 0.7 are considered acceptable and those above 0.8 are considered meritorious (Nunnally, 1978; Carmines and Zeller, 1979; Litwin, 1995). All of the α values for constructs are above 0.8, indicating a high degree of internal consistency in the responses.

Two main types of validity, content and construct validity, were tested. Content validity refers to the extent to which a measure represents all facets of a given concept. The content validity of the survey used in this study was tested through a literature review and interviews with practitioners. As such, the survey items were based on previous studies and discussions with the construction executives. The industry interviews encompassed nine executives from the Owner, Architect–Engineering (A–E), and General Contractor (GC) groups (three practitioners from each group). The refined assessment items were included in the final survey. Finally, copies of a draft survey were sent to several industry professions to pre-test for the clarity of questions. Their insights were also incorporated into the final version of the survey.

The construct validity was tested by factor analysis. Factors were extracted using varimax rotation. Eigenvalues greater than one were used to determine the number of factors in each data set (Churchill, 1991). Additionally, as suggested by Hair et al. (1995), an item is considered to load on a given factor if the factor loading from the rotated factor pattern is 0.50 or more for that factor. The factor loadings for most of the items used in the study are at least 0.6. However, two items for team cohesiveness were dropped due to low factor loadings. Cronbach's alpha values and factor loadings for the survey items are presented in Table 2.

4. Results and analysis

4.1. Correlations among leadership, teamwork and overall project performance

Leadership was considered along the two dimensions: transactional leadership and transformational leadership. Teamwork was measured by team communication, team collaboration, and team cohesiveness. Additionally, project performance was assessed by schedule performance, cost performance, quality performance, and stakeholder satisfaction. Each dimension is composed of several survey items that measure its various aspects. The data analysis consists of examining the correlations among the composite measure of leadership, the

Table 2
Cronbach's alpha values and factor loadings for the survey items.

| Construct | Number of items | Cronbach's alpha | Range of factor loadings |
|-----------------------------|----------------------------|------------------|--------------------------|
| Transactional leadership | 4 | 0.848 | 0.623 to 0.864 |
| Transformational leadership | 6 | 0.909 | 0.594 to 0.860 |
| Team communication | 6 | 0.858 | 0.609 to 0.783 |
| Team collaboration | 6 | 0.938 | 0.590 to 0.837 |
| Team cohesiveness | 8 (two items were dropped) | 0.904 | 0.576 to 0.874 |
| Schedule performance | 4 | 0.910 | 0.771 to 0.824 |
| Cost performance | 4 | 0.887 | 0.616 to 0.860 |
| Quality performance | 4 | 0.891 | 0.747 to 0.843 |
| Stakeholder satisfaction | 4 | 0.915 | 0.591 to 0.775 |

composite measure of teamwork, and the composite measure of project performance. The results of the correlation analysis are presented in Table 3. The results from the analysis suggest that all the three composite measures (project manager's leadership, teamwork, and overall project performance) are highly correlated.

4.2. Identification of project clusters with the same perceptions of teamwork

Cluster analysis was used in an exploratory mode to develop an objective classification of projects. In order to identify homogeneous projects clusters with the same kinds of perceptions of teamwork, a *K*-means cluster analysis was performed on the basis of the three dimensions of teamwork. To validate the results of the cluster analysis, a discriminant analysis was also conducted. The cluster analysis has identified two clusters for team communication, with the cluster mean values of discriminating variables given in Table 4. The discriminant analysis classified 100.0% of the projects as the cluster analysis did, indicating extremely good differentiation and a correct classification. These results further suggest that the two clusters are distinctive. In addition, independent-samples *t* tests were undertaken to assess

Table 3
Correlation between the mean dimensions.

| Variable | Leadership | Teamwork | Project performance |
|---------------------|------------|----------|---------------------|
| Leadership | 1.000 | | |
| Teamwork | 0.512 ** | 1.000 | |
| Project performance | 0.498 ** | 0.588 ** | 1.000 |

** Significant at the 0.01 level.

Table 4
Cluster means of discriminating variables.

| Variable | High performance | | Low performance | | t-statistic | p-value |
|--------------------|------------------|------|-----------------|------|-------------|---------|
| | | | | | | |
| | Project teams | | Project teams | | | |
| | Number | Mean | Number | Mean | | |
| Team communication | 132 | 4.86 | 80 | 3.67 | 19.487 | 0.000 |
| Team collaboration | 163 | 4.77 | 49 | 3.21 | 15.846 | 0.000 |
| Team cohesiveness | 152 | 4.91 | 60 | 3.74 | 18.112 | 0.000 |

the internal validity of the cluster results. The independent-samples *t* tests shown in Table 4 confirm that the variable of team communication does significantly differentiate across the two clusters. The first cluster was labeled project with high team communication. The second cluster consists of projects with low team communication.

Similarly, the study identifies two segments for each of the other dimensions (i.e., team collaboration and team cohesiveness). The cluster mean values of discriminating variables and test results for the two dimensions are also shown in Table 4. In addition, the discriminant analysis classified 90.6 and 95.3% of the projects for team collaboration and team cohesiveness respectively, indicating extremely good differentiation and a correct classification.

4.3. Moderating effect of project type

The subject projects were categorized according to eight data class variables: industry sector, total installed cost, owner regulation, initial site, team size, complexity, project typicality, and international involvement. In other words, project type was assessed by using these attributes. The projects were also examined by clustering them on the basis of differences in perceptions of the proposed teamwork dimensions. The study reveals two segments for each of the three teamwork dimensions.

To test for the moderating influence of complexity on the relationship between team communication and overall project performance, 2 (team communication) \times 3 (complexity) analysis of variance (ANOVA) were performed. The two-way ANOVAs were utilized to determine the joint effects of team communication and complexity on overall project success. Table 5 summarizes the results of the ANOVAs. The results indicate a significant interaction of team communication (TCOM) and complexity (*C*) for overall project performance, $F=3.839$, $p<0.05$, and there was also a significant interaction of team collaboration (TCOL) and complexity for project performance, $F=6.822$, $p<0.001$. Furthermore, the results show a significant interaction of team cohesiveness (TCOH) and complexity for project success, $F=6.156$, $p<0.001$. These findings suggest that project complexity has a moderating effect on the relationship between each of the teamwork dimensions and overall project success.

Table 5
Results of ANOVA.

| Teamwork | Moderator | | | |
|---------------------------|-------------------------|-------------------|----------------|--------------------------------|
| | Complexity (<i>C</i>) | Project size (PS) | Team size (TS) | International involvement (II) |
| Team communication (TCOM) | 3.839 * | | | |
| Team collaboration (TCOL) | 6.822 *** | 5.485 *** | 3.956 * | 4.356 * |
| Team cohesiveness (TCOH) | 6.156 *** | | | |

* Significant at the 0.05 level.

*** Significant at the 0.001 level.

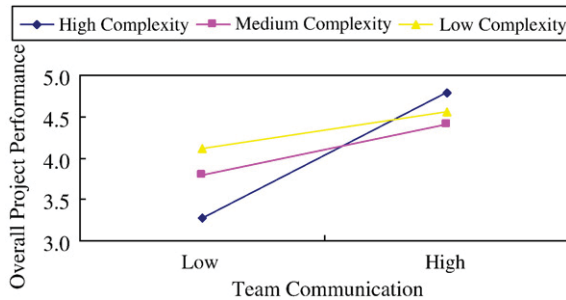


Fig. 2. Moderating effect of project complexity on the relationship between team communication and project success.

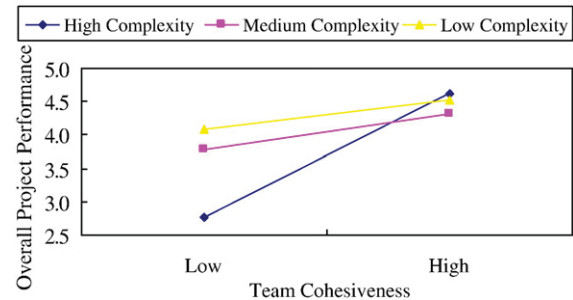


Fig. 4. Moderating effect of project complexity on the relationship between team cohesiveness and project success.

Figs. 2–4 show the relationship between teamwork and project success at different levels of project complexity. It is clear that projects with high complexity were more likely to be successful when they experienced a high level of team communication, collaboration, and cohesiveness than those with less complexity. The study also examined the correlations between individual teamwork dimensions and project performance for each level of project complexity. The results of the correlation analysis are presented in Table 6. The results of this study indicated a significant positive correlation between each of the teamwork dimensions and project performance for projects with high and medium complexity. However, the relationships are low and not significant for projects with low complexity. These results further prove that the complexity may play a moderating role in the relationship between teamwork and project success.

In order to test for the moderating influence of project size on the relationship between team collaboration and project performance, 2 (team collaboration) \times 3 (project size) ANOVAs were also performed. The results of the ANOVAs are also presented in Table 5. The results indicate a significant interaction of team collaboration (TCOL) and project size (PS) for project performance, $F=5.485$, $p<0.001$. As shown in Table 5, a significant interaction of team collaboration (TCOL) and team size (TS) also exists for project performance, $F=3.956$, $p<0.05$. Additionally, the results show a significant interaction of team collaboration and international involvement (II) for project success, $F=4.356$, $p<0.05$. The findings suggest that project size, team size, and international involvement have

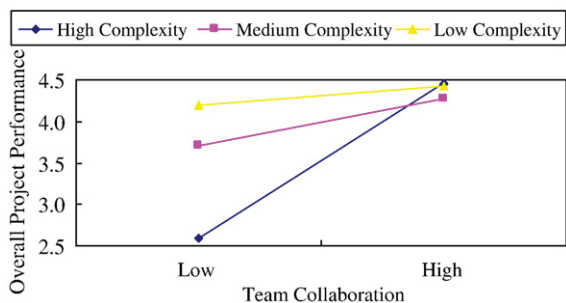


Fig. 3. Moderating effect of project complexity on the relationship between team collaboration and project success.

a moderating effect on the relationship between team collaboration and overall project performance. However, there was no significant interaction of teamwork dimensions and project performance for the other data class variables. Since the interaction term was significant, the form of interaction was graphically represented to evaluate the direction of the differences within each of the conditions.

Fig. 5 graphically presents the relationship between team collaboration and project success for project size. Analyses suggest that medium and small projects were more likely to be successful when they experienced a high level of team collaboration than large projects. Results from the correlation analysis (see Table 6) indicate a significant positive correlation between team collaboration and project performance for medium and small projects. However, the relationship for large projects is not significant. Additionally, Fig. 6 graphically presents the relationship between team collaboration and project success for team size. The findings indicate that large project teams may achieve higher levels of project success when they experienced high collaboration than medium and small project teams. Results from the correlation analysis (see Table 6) indicate a significant positive correlation between team collaboration and overall project performance for large project team. However, the relationships for medium and small project teams are not significant. These results further prove that team size has a moderating effect on the relationship between team collaboration and project success. Fig. 7 presents the relationship between team collaboration and project success for international involvement. It is clear that international projects were more likely to be successful when they experienced a high level of team collaboration than local projects. Results from the correlation analysis (see Table 6) indicate a significant positive correlation between team collaboration and project performance for international projects. However, the relationship for local projects is not significant. These results further prove that international involvement has a moderating effect on the relationship between team collaboration and project success. In summary, the findings suggest that project complexity has a moderating effect on the relationship between the teamwork dimensions and overall project success. Additionally, project size, team size, and international involvement have a moderating effect on the relationship between team collaboration and overall project performance.

Table 6
Correlation between teamwork and project success by project type.

| Teamwork | Complexity | | | Project size | | | Team size | | | International involvement | |
|---------------|------------|----------|-------|--------------|----------|---------|-----------|--------|-------|---------------------------|-------|
| | High | Medium | Low | Large | Medium | Small | Large | Medium | Small | International | Local |
| Communication | 0.658 ** | 0.518 ** | 0.285 | – | – | – | – | – | – | – | – |
| Collaboration | 0.795 ** | 0.449 ** | 0.166 | 0.291 | 0.553 ** | 0.333 * | 0.530 ** | 0.283 | 0.327 | 0.558 ** | 0.286 |
| Cohesiveness | 0.818 ** | 0.505 ** | 0.310 | – | – | – | – | – | – | – | – |

* Significant at the 0.05 level.

** Significant at the 0.01 level.

5. Conclusions and recommendations

Some project managers develop particular leadership behaviors in an attempt to improve the performance of a project. However, the lack of information regarding uncertain competitive advantage from leadership behaviors results in a manager's reluctance to adopt different leadership styles. Since the benefits of leadership behavior can be rather intangible, this has slowed or prevented the implementation of leadership theories. While research has centered on the benefits derived from the behaviors of leadership, relatively less has approached the associations among leadership style, teamwork, and project performance. Additionally, few articles are known about whether project type moderates the relationship between teamwork and project performance. Thus, a study of the relationships among leadership style, teamwork, and project success is necessary.

The objectives of this research were to investigate the associations between the project manager's leadership style and

teamwork and the impact of teamwork on project performance. These analyses show that increases in levels of leadership may enhance relationships among team members. More specifically, the results indicate that the project managers who adopt transactional and transformational leadership may improve team communication, team collaboration, and team cohesiveness. In investigating the relationship between teamwork and project performance, teamwork is positively related to project performance. The findings suggest that project success in terms of schedule performance, cost performance, quality performance, and stakeholder satisfaction can be achieved with stronger team communication and collaboration as well as greater team cohesiveness.

The other objective of this research was to determine whether project type may act as a moderator between teamwork and project performance. These subject projects were categorized according to eight data class variables: industry sector, total installed cost, owner regulation, initial site, team size, complexity, project typicality, and international involvement. In other words, project type was assessed by using these attributes. The projects were also examined by clustering them on the basis of differences in perceptions of the proposed teamwork dimensions. In other words, cluster analysis was used as a means to group similar properties on the basis of team communication, collaboration, and cohesiveness. Independent-samples *t* tests were undertaken to assess the internal validity of the cluster results. Combining these results with those of the discriminant analyses, a two-cluster solution was identified. The study reveals two segments for each of the three teamwork dimensions.

To test for the moderating influence of project type on the relationship between teamwork and project performance, two-way analysis of variance was performed. The ANOVAs were utilized to determine the joint effects of teamwork and project

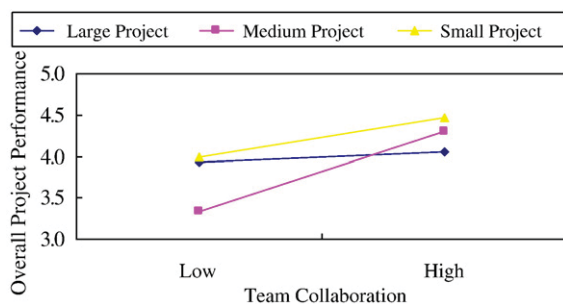


Fig. 5. Moderating effect of project size on the relationship between team collaboration and project success.

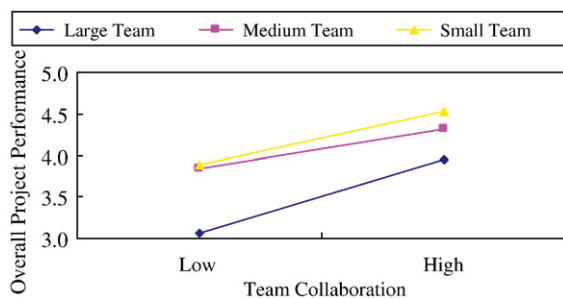


Fig. 6. Moderating effect of team size on the relationship between team collaboration and project success.

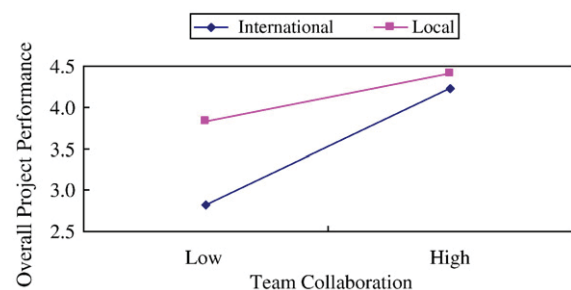


Fig. 7. Moderating effect of international involvement on the relationship between team collaboration and project success.

type on overall project success. These findings suggest that project complexity has a moderating effect on the relationship between each of the teamwork dimensions and project success. Since the interaction term was significant, the form of interaction was graphically represented to evaluate the direction of the differences within each of the conditions. The results suggest that projects with high complexity were more likely to be successful when they experienced a high level of team communication, collaboration, and cohesiveness than those with less complexity. The study also examined the correlations between individual teamwork dimensions and project performance for each level of project complexity. The results of the correlation analysis indicated a significant positive correlation between each of the teamwork dimensions and project performance for projects with high and medium complexity. However, the relationship is low and not significant for projects with low complexity. These results further prove that the complexity may play a moderating role in the relationship between teamwork and project success. Additionally, project size, team size, and international involvement have a moderating effect on the relationship between team collaboration and project performance. Analyses suggest that medium and small projects were more likely to be successful when they experienced a high level of team collaboration than large projects. The findings also indicate that large project teams may achieve higher levels of project success when they experienced greater team collaboration than medium and small project teams. Finally, it is clear that international projects were more likely to be successful when they experienced a high level of team collaboration than local projects.

The Taiwanese construction industry might have different characteristics from other highly developed countries. However, the survey items used in this study were designed to eliminate cultural response bias. Consideration was given to determine if the items can be applied to various types of projects during the development of survey. Effort was made to seek survey items common to most projects. Thus, the items assessed in this study are commonly performed on a wide variety of projects, including various capital facility projects in highly developed and developing countries. The sample for this study focuses on capital facility projects in the construction industry. These subject projects were categorized according to eight data class variables: industry sector, total installed cost, owner regulation, initial site, team size, complexity, project typicality, and international involvement. Since this research provides objective classification for each project type, the results associated with moderating effects may be generalized to the construction industries in other countries.

The survey used in this study was also tested through interviews with senior practitioners in the high-tech industry. The industry interviews consisted of 3 managers/deputy managers, 3 assistant managers, and 3 directors involved in high-tech projects. With respect to age, 5 of the respondents are more than 40 and the remaining 4 are between 35 and 40. Furthermore, 1 of the respondents indicated that he held a Ph.D. degree, while 5 held a master's degree. The remaining 3 held a bachelor's degree. These senior executives suggested that the

survey items associated with leadership style, teamwork, and project performance can be employed to assess various types of projects in the high-tech industry. On the other hand, the questions concerning project type need to be revised to match projects in the high-tech industry. These experts stated that the results may not be generalized to high-tech projects. However, by using the revised survey, consideration can be given to investigate the associations in the high-tech industry.

In summary, the research provides empirical evidence that supports the expectation of gaining significant benefits with adoption of a particular leadership style. This paper reports on the findings of empirical research and provides recommendations for improving relationships among team members and project performance. Findings from this study are helpful to project managers in deciding whether to adopt a certain leadership style on projects. One limitation of this study is its cross-sectional design. An objective for future study is to determine how the associations are changing over time. Survey with a longitudinal design may be needed to gain deeper insights into the nature and moderating roles of the relationships. Furthermore, the sample for this study focuses on capital facility projects in the construction industry. Consideration should be given to investigate the associations in other industries. This could also lead to greater insights into the associations between leadership behaviors and project success. Finally, the potential effects of team members on the project manager's leadership style also need to be considered in further research.

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Lessons from Leadership Theory and the Contemporary Challenges of Leaders Theory to Practice

Leadership theories and the academic literature can sometimes seem difficult for practitioners to understand because of complex conceptualizations, obscure terms, and its enormity. Yet taken as a whole, the literature makes a great deal of sense and has much to offer. Indeed, the truths are often quite simple, elegant, and straightforward. The purpose of this article is to review the major findings of the organizational leadership literature and to identify the important overarching insights, specifically those of particular importance to today's leaders in administrative positions in the public sector, where an evolving context constantly reconfigures age-old challenges.

Leadership theories, and the academic literature related to those theories, can sometimes seem difficult for practitioners to understand because of complex conceptualizations, obscure terms, and their sheer numbers. Taken as a whole, however, the literature makes a great deal of sense and has much to offer. Indeed, the truths are often quite simple, elegant, and straightforward. The purpose of this article is to review the major findings in the literature on organizational leadership and to identify the overarching insights, especially those of particular importance to contemporary leaders in administrative positions in the public sector because of their different context (Anderson 2010; Hooijberg and Choi 2001).

In this article, we will concentrate on leaders in the public sector with career administrative positions, generally occupying civil service positions. That is, the focus is organizational leadership in the public sector rather than political or policy-making leadership. For the purpose of this article, we will address leadership at all levels, from supervisors to executives, as well as leadership as a process rather than a function solely of individuals.

After a discussion of the challenge of defining leadership, the first purpose of this article is to provide a

frame for what is constant in leadership and what is new in leadership. The second purpose of the article is to present five well-recognized theories of leadership, along with their bodies of related literature (Van Wart 2012; Yukl 2002). For the sake of simplicity, those overarching theories of leadership are labeled as follows:

1. Classical management and role theory
2. Transactional leadership theory
3. Transformational leadership theory
4. Horizontal or collaborative leadership theory
5. Ethical and critical leadership theory

Each of these broad theories includes a variety of valid theoretical domains and perspectives.¹ Also, each of the theories of leadership has been associated with major research eras or heydays, but all of them have continued to evolve and to be used in research, education, and training as other theories have risen to prominence. In this article, we will focus both on the latest research findings and on those aspects of the literature that have best endured the test of time.

We will explain a broad lesson in each of the five leadership theories, then offer two to four insights. All are widely agreed-upon insights from researchers in the topic area. In the main, taking advantage of the lessons of the leadership literature takes an ability to use one's talents effectively, to learn from both good and bad experiences, to thoroughly understand one's current situation, and to establish a sense of

character and competence that others trust—no small order (Phillips and Loy 2008). Understanding the lessons of leadership is important in order that those aspiring to leadership may identify their strengths and weaknesses and improve

themselves, as well as leadership in their organizations. Nonetheless, understanding alone is only the first step to effective leadership, and that first step is,

The focus is organizational leadership in the public sector rather than political or policy-making leadership.

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generally, the easiest. Mastering the many lessons of leadership is challenging, but those hoping to become effective leaders should be able to meet the challenges and enjoy doing so.

The Challenge of Defining Leadership: Where You Sit Is How You Define It

Everyone feels that they know leadership “when they see it,” and everyone can talk about it impressionistically. Trading impressions, however, ultimately is not very useful beyond superficial discussions because leadership is a complex set of processes that is difficult to perform successfully. Further, there are fundamentally different types of leadership, such as social movement leadership, political leadership, and organizational leadership. Even when examining organizational leadership, the differences between underlying ideal models of private and public sector leadership are significant, though they share much in common, too. Thus, to be able to discuss leadership coherently with others and to be able to use it effectively for hiring, development, promotion, evaluation, and a host of other pragmatic functions, it is necessary to make fundamental distinctions, expose assumptions, define terms, and have some basic mental models of leadership that are context specific.

Simplistic definitions of leadership abound in “how-to” leadership books in corporate, political, social, and administrative contexts. A common perspective in such books is to define leadership by one important aspect, such as the ability to influence others, the ability to change organizations, the ability to provide a vision, the ability to create consensus to move forward, the use of emotional intelligence (Goleman, Boyatzis, and McKee 2002), or even the use of common sense (Cain 1999). A strength of this approach is the focus that it brings to a complex concept and, when done well, the valid insights that the reader may be able to apply to his or her understanding and context. A weakness of this approach is that it inevitably omits many leadership roles and may even belittle other perspectives (Kotter 1990; Zaleznik 1977).

A second approach is to provide a list of important factors, frequently embedded in a philosophy that is associated with a specific individual or context. Examples of such broad-based list approaches include leadership of Marines, of warriors (e.g., Logan, King, and Fischer-Wright 2008; Roberts 1985), of the approach of individual corporate chief executive officers and other executives, and so on. A strength of this approach is the more holistic perspective and, when well done, the examination of the principles undergirding leadership. A weakness of the laundry-list approach is that it is difficult to tell how much the specialized context is really typical or generalizable, and thus the reader must make a large leap to his or her situation. Indeed, both the focused and list approaches tend to be highly universalistic across sectors, industries, levels of leadership, and situations.

When academics need to come to terms with the complexity of defining leadership, the problem is often reversed as they try to be comprehensive or situationally precise. They can easily spend an entire chapter cataloging definitions (Bass 2008) or assert that the 221 extant definitions that one researcher found were all deficient

(Rost 1991). While this type of analysis can be highly enlightening, it can easily overwhelm the practitioner and even other academics. Much leadership research works in very specific leadership situations that are carefully controlled so that the problem of excessive universalism is avoided and the innumerable situations studied provide a highly nuanced picture for a specific area such as administrative leadership. However, both the narrowness of the study and the terminology of the academic style make it difficult for practitioners to use, which is reason for a bridging article like this.

The answer for practitioners is often to decide what perspective they want to adopt for their concrete purpose and be explicit about the assumptions adopted. For example, is the purpose of study to help *individuals* build better leadership skills from a relatively managerial perspective, mentoring aspect, or organizational change approach? Or is the purpose of study to examine how *systems* function effectively or how they are integrated into the overall environment? That is, does one want to adopt the perspective that individuals add up to systems of leadership, or that leadership is a system composed of individuals? The difference is not trivial. This is the level of analysis issue. Another particularly important aspect of leadership is whether one is more interested in explaining how leadership *is* (i.e., descriptive) or *should be* (i.e., prescriptive). Still another example of definition and focus decisions is the level of activity analyzed, such as tasks, behaviors, or style patterns, which may make an enormous difference depending on whether one is adopting an overarching leadership philosophy or providing contextualized feedback to a line supervisor.

This article provides a relatively instrumental framework by looking at five levels of analysis that are roughly equivalent to the five

This article provides a relatively instrumental framework by looking at five levels of analysis that are roughly equivalent to the five theories described earlier: getting results, leading followers, leading organizations, leading systems, and leading with values.

theories described earlier: getting results, leading followers, leading organizations, leading systems, and leading with values. It provides both descriptive analysis of leadership practices and trends but also extends the prescriptive recommendations of best practice from both effectiveness and value-based perspectives. There are other equally valid ways of examining the field of administrative leadership (e.g., through power, gender, culture, various postmodern and critical perspectives, etc.) that space does not allow.

The Old and the New in Leadership Theory

Leadership is constantly changing because of new contexts, tools, conceptualizations, and concerns, as illustrated by the differing situational demands on leadership. While abstract principles may remain consistent, the more practical and operational aspects generally vary substantially and are vitally important for leaders if they are to lead effectively. Sometimes genuinely new aspects of organizational life develop; for example, communication patterns have been fundamentally different in the last quarter century because of the Internet. Leadership and communication are inextricably intertwined, so the types of communication skills that leaders need change, as well as their concomitant responsibilities (Kouzes and Posner 2002). Sometimes the practices in organizations shift substantially over time. For a variety of reasons, including the education of the workforce, the rise of technology, and the thinning

of management in recent decades, organizations use more teams and have tried more to devolve work as much as possible, including coproducing with clients in some cases (Denis, Langley, and Sergi 2012). The fact that leaders lead “flatter” organizations is an example of how changing organizations subtly but profoundly affect leadership. Sometimes there are ideological shifts in society that affect notions of how systems should be organized. Since the early 1980s, the emphasis on increasing types of public services to compete, compare, and outsource has been immense, and, more recently, many academics and practitioners have been focusing on the importance of networking and collaborating in contemporary society. While “hierarchical” skills are not going to disappear (Gabris and Ihrke 2007), the change in emphasis caused by the new paradigmatic shifts in the public service are enormous (Heifetz, Grashow, and Linsky 2009). Sometimes what is new in situational leadership influences the changes in constraints and demands on leaders in particular contexts; for example, leaders dealing with disasters face challenges very different from those trying to motivate others to prepare for disasters (Van Wart and Kapucu 2011).

So, in our times, what primary challenges must public leaders face, and which of those challenges will shape our research agenda and the lessons that researchers seek to craft? There are numerous lists of overarching, contemporary challenges affecting public organizations and their leaders (e.g., Abramson, Breul, and Kamensky 2006; Cortada et al. 2008; Saner 2001), from which we can discern a number of trends affecting public sector leadership, often in ways quite different from their private sector counterparts; for example, while the balance sheets of corporations are at all-time highs, the stress on public sector organizations around the world is greater than at any time since the end of World War II. While the phenomenon of organizational decline is not new in the public sector, and while many important lessons are to be learned from that decline (Bozeman 2010), the Great Recession and the continuing restructuring of our political economy will certainly provide a unique constellation of factors dissimilar to those that public sector leaders have confronted in many decades (Pandey 2010). Other challenges include the marketization of public agencies, heightened employee cynicism, pension reform, acquisition of new virtual management skills, and the widespread loss of social consensus, among others. Table 1 provides a summary of some of the specific situational challenges facing public sector managers today.

Table 1 Contemporary Challenges for Administrative Leadership in the Public Sector

| Leadership Focus | Some of the Contemporary Challenges |
|-----------------------|--|
| Leading for results | <ul style="list-style-type: none"> Long-term fiscal stress, need for tough choices Globalization and the penetration of higher levels of competition and market values |
| Leading followers | <ul style="list-style-type: none"> Increased cynicism of employees Reduced resources to compensate (e.g., reduced benefits packages) |
| Leading organizations | <ul style="list-style-type: none"> Technological revolution and the need for virtual management and leadership skills Redesigning organizations and systems to fit dramatically different public demands |
| Leading systems | <ul style="list-style-type: none"> Challenges of team-based organizational structures Unraveling social consensus |
| Leading with values | <ul style="list-style-type: none"> Lack of trust in political and administrative systems Confusion about which paradigm to follow (e.g., hierarchical, market-based, or collaborative) |

We now turn to the new challenges facing leaders in the context of broader, enduring patterns of best practices, especially as those practices have been developing in public sector organizations.

Management Theory: Effective Leaders Understanding and Accepting the Complexity and Demands of Their Roles

Management theory is based on the idea that organizations are systems in which desired goals are achieved through the wise use of human, financial, technological, and natural resources (Fayol 1930). Effective management requires planning, organizing, staffing, directing, coordinating, reporting, and budgeting, among other things (Gulick and Urwick 1937).

Leaders are not the only factor influencing organizational success, follower happiness, and constituent satisfaction; however, leaders are generally significant factors and, sometimes, the most important factor (e.g., Fernandez 2005; Hennessey 1998; Kaiser, Hogan, and Craig 2008; Trottier, Van Wart, and Wang 2008). For example, in a study using 30,000 respondents, Dull (2010) demonstrated the strong relationship between trusted leadership and satisfaction, perceived performance, and a sense of freedom in expressing opinions. The literature also points out, however, that leadership is often romanticized or exaggerated in many circumstances, even when leaders are perceived to play relatively strong roles (e.g., Kets de Vries 1988; Waldman et al. 2001); that administrative leaders, in the public sector in particular, are severely constrained from making dramatic differences (Kaufman 1981; Van Wart 2012); and that change and organizational success depend on many factors beyond the leaders themselves (Fernandez, Cho, and Perry 2010). Leaders have the responsibility of dividing and coordinating work in complex systems in which distractions, systems deterioration, and external challenges are constant, even in stable times (Mintzberg 1973). Unstable times and crises increase distractions and challenges and often require a completely different set of skills (Boin and Otten 1996; Wheatley 2006). The variety of needs and expectations of followers is enormous and almost insatiable, so ensuring that well-trained and top-performing followers do not leave because of poor leadership at any level is important (Buckingham and Coffman 1999). Constituent satisfaction is ever changing, so leaders need to ensure that those needs are constantly being monitored for quality and adjustment (Moynihan 2004). There are some important corollaries to the fact that leadership is important and challenging.

Leaders strongly expect results. One measure of the challenge of leadership is in the harsh assessments that we give our leaders. If leadership were easy, more would be perceived as effective leaders. Many are perceived as effective administrative leaders, but few as exceptional leaders. For example, in the data on administrative leaders in the U.S. federal system, one study showed that the overall average for leaders was 3.42 on a five-point scale, with five being high, and with transactional skills being higher than transformational skills, although followers wanted the reverse (Trottier, Van Wart, and Wang 2008). Direct supervisors did much better, at about a 64 percent average rating, but federal executives hovered around 50 percent (OPM 2008, 2011).

Leadership is difficult because leaders play many major roles, with each role entailing its own competencies, requirements, and

challenges. A certain continuity of those roles has existed over time with a focus on and balance of tasks and people (e.g., Blake and Mouton 1964; Hemphill and Coons 1957), but more recent examinations have also revealed the increasing importance of change (Bass 1985; Ekvall and Arvonen 1991; Fernandez 2008), diversity (Barney and Wright 1998; McLeod, Lobel, and Cox 1996; Pitts 2005), and integrity (Colquitt et al. 2001). In a study of U.S. federal managers, Fernandez, Cho, and Perry (2010) explained how leaders are expected to perform (or grapple with) five major roles more or less simultaneously. Those roles closely relate to the five foci identified and explained in the literature that served as an important source of information for this article. First, leaders must lead in task accomplishment by informing, communicating goals, accepting suggestions and making improvements, and, ultimately, evaluating performance. Second, leaders need excellent human relations skills so that followers more easily practice and thereby improve their own leadership skills so that they ultimately will feel empowered. Third, leaders need to facilitate change by encouraging and rewarding innovation and creativity. Fourth, given the rise of minorities, ethnic groups, and the changing roles of women in the workplace, leaders must make leading in diversity a top priority by making sure that the public workforce represents the public at large and that people of different backgrounds are comfortable. Finally, leaders need to lead with integrity, which includes not only such standard virtues as honesty and selflessness but also working hard to discourage and prevent unethical conduct and to maintain an environment safe for the disclosure of wrongdoing. Because those leadership roles involve greatly diverse functions, they often involve conflicting values and goals; also, in times of social unrest and economic stress, of diminishing trust among leaders and the led, of increasing penetration of markets, and of great and frequent changes, the roles become more difficult to fill effectively.

Administrative leadership requires developmental education and training. The expectations and challenges are so great that most leaders will derail, be overwhelmed, or stagnate as their jobs evolve (McCall, Lombardo, and Morrison 1988). Leaders must develop a variety of skills (discussed later) so that they can fulfill their technical functions and be able to lead in a variety of styles well; furthermore, the more leaders advance in their positions, the more related experience is necessary so that they can handle their positions (Jaques 1989). Hunt (1996) described three styles of leadership—direct, organizational, and systems—based on the echelon or the stratum of the organization that the leader occupies. Frontline supervisors are direct leaders who first need the technical competencies and basic interpersonal skills to perform their jobs effectively. Mid-level managers run programs and integrate operations as organizational leaders. Senior managers and executives operate in systems in which conceptual skills expand as an understanding of changing markets, distant threats, innovations in other fields, and political interventions become more important; in addition, contemporary leaders must contend with leaner and flatter organizations that require employees lower in organizations to have competencies formerly considered more managerial because they must deal with more self-management, problem solving, and customer or client relations on the front line (Brookes 2011). Low-level employees, therefore, need more education upon entry

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and more training in service and have a greater need for worker and leader continuity, but the new needs fly in the face of organizational and demographic trends that discourage loyalty and long-term relationships and, understandably, contributing to complaints from hiring managers that good applicants cannot be found despite large candidate pools because of the breadth of experience and the technical abilities now commonly required.

Transactional Leadership Theory: Leaders Need to Use a Variety of Styles with Followers as They Pursue Multiple Goals

Transactional leadership theories have focused on the daily interactions of leaders and their followers. The theories emphasize the operational level, so these theories have tended to be used among supervisors, but their use among executives is not inappropriate.

Good leaders need to be sure that followers have what they need to do the job: direction and training, encouragement and support, participation, achievement-oriented motivation, and independence after they reach high levels of competence. Based on expectancy theory (Vroom 1964), leaders need to facilitate the basics of employee motivation so that followers have the ability to do the job, the belief that they will succeed, and the feeling that their efforts will be worthwhile. A number of researchers have focused on the various needs resulting in differing styles. Hersey and Blanchard (1972) asserted that leaders need to pay close attention to the developmental and related psychological states of followers as they mature and adjust their styles accordingly. They asserted that workers need and want training and structure when they are new and inexperienced, therefore making them receptive to a directing style. As soon as the workers have gained some knowledge and experience, supervisors will be able to engage in discussions with them in order to enhance worker understanding and help them continue to improve. Such discussions lend themselves to a coaching style. When workers become relatively competent and able to solve problems on their own, the ideal style is supporting because it allows substantial freedom with minimal oversight. When workers are reliably competent and almost entirely self-directed, the ideal style is delegating. Hersey and Blanchard have come under a good deal of criticism for their simplicity and lack of empirical support (e.g., Yammarino et al. 2005), but their development of a logical series of leader styles was important, and their model continues to be popular in supervisory training.

A similar but more sophisticated way of looking at followers' needs is to emphasize the leader's role in creating clear paths for followers in achieving joint goals (House 1996; House and Mitchell 1974). Based on contingencies, leader will choose to use the styles that will help his or her followers succeed; for example, in order to avoid discouraging followers, leaders may use "directive" leadership to

compensate for or to correct one or a combination of such administrative or operational weaknesses as unclear job descriptions, a lack of instructions, or overlapping or unclearly delineated job responsibilities. It is a leader's responsibility to ensure that the requirements of the job are clearly presented. The researchers have a number of other prescriptions. When jobs are difficult because of complexity

or change, participatory leadership is helpful, as is achievement-oriented behavior when higher standards are required. Unpleasant jobs call for supportive leadership. Highly interdependent followers call for more participatory leadership. When workers have more control over their jobs, achievement-oriented leadership works better than does directive leadership. Lack of training and education commonly calls for a more directive style, as do situations in which subordinates have a preference for structure and order; however, when workers prefer firm control over their work, a more participatory or achievement-oriented style of leadership tends to work more effectively. As the need for security grows, so does the preference for directive leadership, but when the need is low, an achievement style may work better. House's research (House 1996; House and Mitchell 1974) has not been without its critics, but the idea of leaders matching styles to different situational demands has nearly universal support.

Contemporary leaders are particularly challenged, for several reasons. Fulfilling the transactional demands of leadership requires much analysis and time because fulfilling those demands is customized. Since the thinning of middle management and the flattening of public sector organizations in the 1990s, practicing transactional leadership has become only more difficult. The Great Recession that began in 2007, along with the resulting fiscal pressure, has, in turn, put pressure on line workers and, implicitly, on leaders to try to take up the slack; further, the increased speed of change in organizations also causes the needs of followers to change more quickly, too.

Good leaders can ill afford to have “out” groups. Stated affirmatively, good leaders create as many “high-exchange” relationships as possible (Graen and Uhl-Bien 1995). High-exchange relationships are those in which followers receive ample attention and good assignments in return for high levels of productivity. Low-exchange relationships are those in which little interaction between leaders and followers occurs because they have fallen into patterns of distrust and followers tend to be unhappy with aspects of their positions, resulting in tendencies toward significantly lower levels of productivity; on the other hand, high-exchange members tend to have better attitudes, to produce more, and to be more flexible. They also change jobs less frequently, advance more frequently, and are more willing to contribute to group goals. This transactional principle implicitly proposes an ideal style; ideal leaders maintain numerous high-exchange relationships, while poor leaders allow or even encourage many low-exchange relationships. That principle is highly articulate and well practiced in military leadership (e.g., Campbell 2009).

Contemporary leaders face “leaner” organizations, making the sidelining of low-productivity workers more problematic, while putting more stress on high-productivity workers to stay in hyper-productive modes; additionally, the greater diversity of the workforce challenges leaders to ensure that workers and groups do not feel less valued because of differing cultural and ethnic backgrounds. Finally, the external level of trust has fallen, so internal levels of goodwill and shared missions become even more important

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in order to increase productivity and to neutralize negative public perceptions.

Leaders need to include followers as much as, but no more than, is necessary in making decisions. For example, Fernandez and Moldogaziev (2011) found that empowerment needs to be wisely implemented if it is to stimulate instead of discourage innovation. One of the primary functions of leaders, but certainly not the only function, is to set the parameters for decision making in their organizations or units. The research by Vroom and Jago (1988) is useful in analyzing those parameters. Four types of decision making, having important ramifications, can be used in a variety of conditions, in order that a decision promote quality, enhance acceptance, provide for timeliness, and control costs, as well as provide opportunities for employee development. “Autocratic” or directive decision making tends to be practical and useful when timeliness is critical, when dissent among others is likely to be high, when input is unlikely to enhance decision quality, or when the decision is routine and participation is likely to be more bothersome than enhancing. Leaders, on the other hand, should consult with followers if they need or want substantial input, individually or in groups, before making decisions. Consultation becomes more useful when timelines are not as critical, when decision centralization is important but hearing different viewpoints is useful, and/or when input is likely to increase decision quality. Joint decision making occurs when leaders allow groups to make decisions with or without veto power. Joint decision making generally takes longer but increases decision acceptance and works well in the absence of strong discord among employees, and decision quality is worth the increased group effort. Delegation occurs when a leader allows others to make decisions and supports them consistently in those decisions. Transactional leadership theory generally holds that good leaders promote higher levels of participation and delegation as groups, units, and workforces are better trained, more closely aligned, and strongly self-directed. Weak leaders, however, can overuse joint decision making, waste a lot of time, delegate responsibilities to employees incapable of managing, or go through participation but frequently override decisions or disregard input (i.e., false empowerment).

Providing the proper amount of decision making, with the appropriate degree of centralization or decentralization, has always been a challenge to modern leaders because of the number of decisions they need to make and because of the difficulty in making such decisions that will also be widely accepted. Contemporary leaders find that challenge particularly acute. Fiscal pressures mean that for the long term, new solutions must be found, innovation must be encouraged, and participation must be maximized, but those same pressures mean that in the short term, timelines are tighter, so, contrarily, more efficient decision making (i.e., less participation) is also encouraged.

Transformational Leadership Theory: Although Not Everyone Can Be a Charismatic Leader, Everyone Can Be a Transformational Leader

At its core, transformational leadership is about managing organizational change. Transformational leaders succeed in

instituting changes in structure, procedure, ethos, technology, and/or production. Javidian and Waldman (2003) found that, similar to transformational leaders in the private sector, transformational leaders in the public sector tend to have four major characteristics: energy and determination, vision, provision for challenge and encouragement for subordinates, and an appropriate degree of risk taking. Just as transactional leadership suited the more static public management from the 1950s to 1970s, the focus of transformational leadership on change especially suits a more tumultuous world. Neither complexity (Uhl-Bien, Marion, and McKelvey 2007) nor chaos (Kiel 1994) in contemporary organizations shows any sign of lessening for their leaders. Indeed, complexity and chaos show every sign of not only continuing but also of fomenting change—at times, dramatic change (Pollitt and Bouckaert 2011). A number of corollaries follow from the preceding conclusion.

A major role for leaders is to facilitate change—in both the mission and vision as well as the values and ethos. Effective leaders not only ensure that things get done and that employees are appropriately empowered in the present but also take the organization into the future. The environments of organizations are always changing, so the roles of their leaders adjust to ensure that the organizations will institute changes as they become necessary (Behn 1998). A charismatic personality may help lead people to change, but it is not necessary (Bennis and Nanus 1985; Roberts and Bradley 1988); the implementation of change is more a science, the basic steps of which may be easily explained (for an excellent summary, see Fernandez and Rainey 2006). Various studies have found that public managers are critical for “reinvention” at the federal level (Hennessey 1998), as well as for innovation at the state and local levels (Borins 2000; Wright, Moynihan, and Pandey 2012). A contemporary challenge lies not only in the quality of technical design that guides the change but also in the clarity with which transformational leaders communicate goals, communicate (including listening as well as speaking) with followers, and minimize political constraints (Moynihan, Wright, and Sanjay 2012).

Transformational leadership rarely interferes with transactional leadership; it supplements it and, generally, proves difficult if transactional leadership does not precede it. Surveys in the public sector routinely show that leaders need both, even if leaders tend to demonstrate more competence in transactional skills than in transformational skills (Bass 1985; Trottier, Van Wart, and Wang 2008). Research also indicates that using change management techniques alone does not lead to success without effective general management skills, strategic planning, performance metrics, and skills for collaborating with external resources (Kelman 2011). Indeed, studies of local government find that “red tape” in the form of performance management metrics improves leadership performance, despite the outcry against bureaucratic rulemaking often expressed in the mainstream literature (Wright and Pandey 2010).

Leaders do not have to know exactly what the change must be, only that change is needed and that it may be achieved in different ways. Depending on the circumstances and on the personality of the leader, change can be top down, bottom up, or horizontal. When major legislative changes occur or an agency is

rocked by scandal, definitive or bold top-down changes may be necessary (Tichy and Devanna 1986). More often, when the changes are meant to be a part of the culture, to enhance efficiency and effectiveness or simply to adapt to contemporary needs, acceptance from the bottom up is needed, support must be generated, and input for execution must be elicited (Kouzes and Posner 1987). Some research indicates that the acceptance of change is even more important in the public sector than in the private, where chief executive officers have more power to drive reforms through unilaterally (Nutt and Backoff 1996). Today, because of global trends, horizontal or networked change is increasingly important, and if whole industries or regions are to flourish, some vision flexibility is necessary to accommodate the larger numbers of stakeholders (Currie, Grubnic, and Hodges 2011).

While transformational leadership requires a great deal from leaders in terms of passion, commitment, energy, and insight, there are many dangers for leaders whose belief in themselves becomes egotistical. History is full of leaders whose success and genius proved to be their undoing (see Xerxes, Julius Caesar, Robespierre, and Hitler). The expression that “power corrupts” simply points out the siren song of great influence, sometimes turning good things into bad perceptions, unhealthy attitudes, or disastrous results (Raskin, Novacek, and Hogan 1991). Great insights and visions can become maniacal domination without pragmatism and input. Self-confidence can become narcissism, or worse, without humility (Conger 1989; Sandowsky 1995; Shipman and Mumford 2011). Heroic instincts such as sacrifice and willingness to take risks can become blind spots and recklessness, thereby leading the entire organization astray; for example, the infamous treasurer of Orange County, California, Robert Citron, never stole a dollar from his county, but his well-meaning but foolhardy “transformation” of public sector cash management led to the largest public default in U.S. history and to jail time for him (Simonsen 1998). Contemporary leaders encounter several additional challenges about their roles in the change process. First, because of market penetration and the pressure of structural reform, the guidelines for what constitutes “good” change are more open to opinion and debate, and headstrong leaders can neglect democratic values (Denhardt and Campbell 2006), resulting in their being perceived as insensitive or egotistical when, in fact, other influences are more critical. Second, contemporary leaders must deal with heightened public consciousness of public sector problems, scandals, and crises and with a willingness of the media to judge harshly implementation errors or lone ethical violations (Boin et al. 2010). Such harsh judgments may cause leaders to be so cautious that they fail to institute needed changes.

Horizontal and Collaborative Leadership Theory: Leaders Need to Be Extremely Careful to Avoid Getting in the Way of Leadership Because It Is Ultimately a Process, Not a Person

Horizontal leadership, also known as distributive leadership, had its research beginnings in the 1970s with the idea that effective leadership often reduces the need for formal leaders by facilitating the use of “substitutes,” such as providing or increasing levels of training, unambiguous tasks, clear protocols, effective frontline problem solving, and recruitment selections based on intrinsic satisfaction

(Kerr and Jermier 1978). Self-managed teams and self-managed networks (Wachhaus 2012) are examples of the trends in current-day management. Just as the operationally focused, transactional leadership theory was complemented later by the growth of transformational leadership, so, too, has distributed leadership theory been complemented by collaboration theory, which focuses on horizontal relationships across agencies (when it is often called “networking”) and sectors (when it is normally called “partnering”). Several corollaries follow from the importance of focusing on leadership as a process rather than as individuals. The meteoric rise of collaborative leadership, as well as the newly reconceptualized horizontal leadership (Pearce and Conger 2003), has resulted directly from the problems facing contemporary leaders who must flatten organizations, provide more organic structures, enhance social integration, create learning organizations with change at the lowest level possible, and even find ways to include clients and the public more fluidly.

Sometimes leaders need to foster systems in which they are not needed or leave those systems alone when they are working well; delegation can be leadership at its best. Formal leaders have limited time; fewer managerial and operational demands allow them to focus their efforts more narrowly on strategic issues. Formal leaders are expensive; reducing their number saves money. Less leadership also allows higher levels of self or group monitoring and innovation. More often than not, in high-performing systems, subordinates will set high standards of production and quality for themselves and need only a minimum of oversight. Formal leadership tends to restrict and tightly control information flows. In many business situations, such restrictions cause dysfunction because good ideas and much enthusiasm come through informal networking, lateral communication, and nonhierarchical forms of innovation diffusion. Finally, formal leadership tends to concentrate power high up in the chain of command; empowerment requires a more devolved and decentralized model of leadership. When successfully implemented, empowerment, whether through participation or delegation, enhances internal accountability, sense of ownership, professional affiliation, and buy-in with group goals (Kim 2002; Locke and Latham 2002).

Horizontal leadership is increasingly valued in a well-educated world of fast change. A prime example is team leadership (Denis, Langley, and Sergi 2012; Katzenbach and Smith 1993). The theory of the self-managed team entails a contingency approach that thrives only under special conditions, but conditions to which most well-managed organizations aspire. The single combined style of team leadership distributes the standard functions of leadership among the members of the group or allows the group to assign leadership functions based on member talents and availability; thus, direction, support, participation, achievement, inspiration, and external connectedness are mutually determined and executed.

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Leaders in collaboration tend to have a particularly strong service mentality and tend to excel at consultation and environmental evaluation.

Mutual determination and execution create an appealing form of work democracy that, when functioning ideally, enhances identification with the work and task selection based on flexibility, innovation, and talent and interest.

Horizontal leadership is increasingly necessary outside the organization, too, and widely called “collaborative leadership.”

Other names include “facilitative leadership,” “adaptive leadership,” “integral leadership,” and “catalytic leadership,” among others. Collaborative leadership focuses on power sharing among organizations (e.g., Crosby and Bryson 2010; Newell, Reeher, and Ronayne 2012). It deemphasizes the roles of both leaders and followers in order to emphasize the needs of the network, system,

environment, or community, resulting in a collaborative style (Jackson and Stainsby 2000; Kettl 2006). Collaborative theory emphasizes the need to support the health of communities and the environment for the good of all, and thus it is particularly well suited to the public and nonprofit sectors. It requires a long-term perspective in achieving many of the desired results. It emphasizes a cooperative, win–win perspective that can be gained only by working painstakingly through problems in order to frame them as opportunities, if those opportunities can be looked at broadly enough. It maintains that all systems, especially those charged with enhancing the common good, have limited resources that tend to be squandered when a systemic approach is not applied. Collaborative leadership is most likely to occur in communities and in professional environments sensitized to communal needs and accountability, where individual leaders share collaborative dispositions. Leaders in collaboration tend to have a particularly strong service mentality and tend to excel at consultation and environmental evaluation. They have a strong sense of community, whether a local or regional community, an environmental community, or a community of practice or need (e.g., a charity). Collaborative leaders are judged by their contribution to building communities, to mutual learning and sharing, to cooperative

problem solving, and to working on “wicked” problems (Heifetz 1994). Despite their growing popularity and increasing use, networks do not replace internal organizational hierarchies, are not ideal organizational forms in all cases in pragmatic terms, and, like most types of leadership, can lead to lower productivity and effectiveness if not managed effectively (Goodsell 2011; McGuire 2006). Even while they emphasize the critical importance of collaborative leadership, advocates often point out the tremendous difficulty in implementing it because of the variety of competing competencies and because of the frameworks that need to be in place (Crosby and Bryson 2010).

While the literature on horizontal and collaborative leadership is currently the most dynamic, the research in this area also identifies the types of problems that must be confronted. The research in collaborative leadership has been strongest when showing how

collaborative leadership has helped revitalize attention on neglected policies (Redekop 2010) and overlooked communities (Morse 2010; Ospina and Foldy 2010), as well as when looking at the specific tools and behaviors of collaboration (Crosby and Bryson 2010; Page 2010; Silvia and McGuire 2010). Collaboration becomes more difficult and the literature less helpful in dealing with challenges when decentralization, devolution, and dispersing power must be accomplished in areas requiring high levels of accountability (McGuire 2006). Collaboration may raise contradictions among organizational, economic, and democratic goals; further, the literature shows that public sector leaders who enter into partnerships without the ability to bargain effectively and without the staff to monitor implementation often serve the common good poorly (Jamali 2004).

Ethical Leadership Theory: Good Administrative Leaders Instill and Build Trust, Understand Duty, and Keep the Common Good in Mind at All Times

Ethics-based approaches to leadership tend to include three major concerns or pillars (Ciulla 2004). The first concern is the *intent* of individuals, whether they are leaders or members of the organization. A second concern is selecting the *proper means* for doing good. A third concern is selecting the *proper ends*. Most would agree that all three concerns (good intent, proper means, and appropriate ends or, stated differently, character, duty, and the greatest good) must be functioning in order for effective leadership (as a process) to be robust (Ciulla 1995). In a topsy-turvy world, robust, effective leadership is more easily discussed than instituted, and, for contemporary leaders, instituting it has never been more challenging or divisive because of the competing values that those leaders face along with standards and demands that have never been higher (Geuras and Garofalo 2011; OECD 2000; Van Wart and Berman 1999; Walzer 2002).

Leaders demonstrate integrity. Integrity has a number of dimensions; all of them relate to the wholeness of oneself in society. The first dimension that people normally think about is honesty or truth telling. The second dimension of integrity relates to trustworthiness (Carnevale 1995). Trustworthy people know their principles, are able to explain them clearly, and consistently conform to them (Manz et al. 2008; Palanski and Yammarino 2009). In the public sector, principles include such civic virtues as dedication to public service, commitment to the common good, and dedication to the law of the land. A third dimension of integrity is fairness. Those with management and executive responsibilities have much discretion, so fairness is important in both the equality of treatment and making rational and appropriate exceptions. The final dimension of integrity is conscientiousness, or concern for doing an effective job (Van Der Wal et al. 2011). At a basic level, conscientiousness means forming good habits and working earnestly; at a higher level, conscientiousness includes striving for excellence, which, in turn, enhances leader credibility (Dull 2009). Leaders understand that duty is important and that it comes with especially high standards in the public sector: duty includes respect for the law, rules, and professional norms (Menzel 2007; Sergiovanni 2007; Terry 1998).

Good leaders know themselves and emphasize the positive, which is often called “authentic” or “positive” leadership. Leaders who are authentic emphasize self-awareness and self-improvement

(Avolio and Gardner 2005; Gardner et al. 2005), and leaders who are positive emphasize openness, transparency, and optimism (Luthans and Youssef 2007; Norman, Avolio, and Luthans 2010). Authentic leaders are self-aware in terms of their values, cognitions, and emotions. The core values of authentic leaders include the basic integrity discussed earlier. They are adept at self-regulation in terms of their emotional intelligence, self-improvement goals, and congruence between their actual and ideal selves. Authentic leaders control their ego drives and defensiveness, thereby encouraging openness, feedback, and effective communication. Their self-awareness increases the transparency in their communication and is more likely to be infused with prudence or wisdom. Finally, authentic leaders develop positive psychological capital with followers, whose self-awareness is also enhanced and whose authentic interaction becomes more likely.

Good leaders know how to lead through service, spirit, sacrifice, and sustainability. First, the proponents advocate altruism and “calling” as values in some explicit form, from the servant to the steward metaphor (Greenleaf 1977; Terry 1995). In the public sector literature, recognition of the importance of identifying, eliciting, and encouraging public service motivation is growing (Alonso and Lewis 2001; Moynihan and Pandey 2007; Perry 1997). Second, responsible leadership always puts the needs of subordinates and external constituents first (Cooper 1990; Cooper and Wright 1992; Giacalone and Jurkiewicz 2003) and ensures that the developmental and mentoring role of the leader is primary (Manz and Sims 1989). It also implies a strong empowerment thrust. Third, at certain times and in certain situations, ethical leaders may subtly emphasize the spiritual and servant roles as they engage in work that requires “emotional labor” and emotional healing when clients have been distressed. Emotional labor is the act of showing sensitivity, empathy, and compassion for others. It is most extensive when negative events such as disasters, death, or great suffering occur (Newman, Guy, and Mastracci 2009). Finally, ethical leadership strongly emphasizes the long-term needs of the community and environment (Kohlberg 1981; Bennis, Parikh, and Lessem 1994).

Despite the logical and emotional appeal of such ethical propositions, researchers point out that applying them is often more difficult and subtle than might be immediately apparent. The clash of value systems for contemporary leaders can be fierce, meaning that integrity alone may not provide the answers (Lewis and Gilman 2005). Simultaneous demands for transparency and privacy, due process and efficiency, are examples of the everyday ethical conflicts that leaders must manage. Authentic leaders, such as transformational leaders, can fall sway to their own agenda (Ford and Harding 2011), and positive leaders can become organizational cheerleaders (Fineman 2006; Hackman 2009; Shipman and Mumford 2011). Excessive attention to laws and rules leads to rigidity (O’Leary 2006; Warner and Appenzeller 2011), but excessive focus on professionalism can lead to elitism (Katzenbach and Smith 1993) or worse (Adams and Balfour 1998). Sometimes leaders think that they are servant or transforming leaders, when in fact they are functioning as charismatic narcissists (Kets de Vries 1985; Cooper and Wright 1992).

The lessons of administrative leadership discussed are summarized in table 2.

Table 2 The Purposes of Leadership

| Leadership Focus | Overarching School Focusing on This Level of Leadership | Famous Examples of Theorists and Their Models | Some Lessons from the School of Thought |
|-----------------------|---|---|--|
| Leading for results | Management theory | <ul style="list-style-type: none"> • Fayol (1930), Gulick and Urwick (1937), organization theory • Hunt (1996), stratified systems theory • Vroom (1964), theory of motivation | <ul style="list-style-type: none"> • There are high expectations of leaders to get results. • Leadership requires developmental education and training. |
| Leading followers | Transactional leadership theory | <ul style="list-style-type: none"> • Hersey and Blanchard (1972), situational leadership • House (1996; House and Mitchell 1974), contingency theory • Graen and Uhl-Bien (1995), leader member exchange theory • Vroom and Jago (1988), decision-making theory | <ul style="list-style-type: none"> • Good leaders need to be sure that followers have what they need to do the job: direction and training, encouragement and support, participation, achievement-oriented motivation, and independence when high levels of competence are achieved. • Good leaders can ill afford to have “out” groups. • Leaders need to include followers as much as necessary in decision making and no more. |
| Leading organizations | Transformational leadership theory | <ul style="list-style-type: none"> • Bass (1985), full-range leadership • Tichy and Devanna (1986), change master theory • Kouzes and Posner (1987), leadership practices • Conger (1989), charismatic leadership | <ul style="list-style-type: none"> • A major and important role of leaders is to facilitate change—both the mission and vision, as well as the values and culture. • Transformational leadership is rarely at the expense of transactional leadership; it is in addition to it, and generally, it is hard to achieve transformation if transactional leadership does not precede it. • Leaders do not have to know exactly what the change must be—only that it is needed and that there are different ways of achieving it. • While transformational leadership requires a great deal of leaders in terms of passion, commitment, energy, and insight, there are many dangers for leaders whose belief in themselves becomes egotistical. |
| Leading systems | Horizontal and collaborative leadership theory | <ul style="list-style-type: none"> • Kerr and Jermier (1978), leadership substitutes theory • Katzenbach and Smith (1993), high performing team theory • Crosby and Bryson (2010), social change theory • Heifetz (1994), adaptive leadership theory | <ul style="list-style-type: none"> • Sometimes leaders need to foster systems in which they are not needed or leave them alone when they are working well; delegation can be leadership at its best. • Horizontal leadership is increasingly valued in a well-educated world of fast change. • Horizontal leadership is increasingly necessary outside the organization, too; this is widely called “collaborative leadership.” |
| Leading with values | Ethical leadership theory | <ul style="list-style-type: none"> • Ciulla (1995, 2004), ethical leadership • Avolio and Gardner (2005), authentic leadership • Terry (1995), conservatorship • Kettl (2006), collaboration theory • Cooper (1990), responsibility theory • Greenleaf (1977), servant leadership | <ul style="list-style-type: none"> • Leaders demonstrate integrity. • Good leaders know themselves and emphasize the positive, which is often called “authentic” or “positive” leadership. • Good leaders know how to lead through service, spirit, sacrifice, and sustainability. |

Conclusion

This review has demonstrated that although the field of leadership is rather complex, paralleling the complexity of leadership itself, the major lessons presented in the leadership literature are nonetheless coherent, and the field continues to provide relevant insights. This review has emphasized that specific aspects of leadership may be straightforward individually, but if those aspects are taken as a whole, leadership quickly becomes more difficult, complex, and demanding. It is important to note that although the broad principles of leadership may be relatively timeless, the specific and practical challenges of leadership evolve and change significantly over time. Today's leaders must deal with ongoing fiscal stress, penetration of market mentalities in the public sector, employee cynicism fueled by fewer resources and greater responsibilities, massive technological and communication changes, the pressure to lead horizontally both inside and outside the organization, unraveling social consensus in many arenas, and, at a basic governance level, confusion about which paradigm to follow and when. Practitioners, then, need to be aware of the vast number of situations and factors

involved, of the great number of competencies demanded, and of the great variety across situations. Perhaps most pertinent of all, leaders need to understand that the leadership skills that worked previously may not work in new situations or in changed environments. It also means that those who think that they can simply rely on their natural leadership talents, no matter how substantial, are likely to derail themselves early in their careers. Leadership requires the pursuit of a lifetime and requires continuous honing if the leader is to avoid reaching a plateau.

To lead change does not require charisma, but it does require basic managerial or transactional competence, a clear sense of what must be accomplished with the ability to let change evolve, and the ability to distinguish among differing bottom-up, top-down, and center-out strategies.

In particular, the literature points out that leaders focus on results, followers, change, and leading systems, albeit with different emphases, as well as leading ethically with principles. To get results, leaders need to have high expectations of themselves and others and constantly upgrade the skills of themselves and their followers. To lead followers well requires analysis and support of their needs, preventing out-groups, facilitating diversity, and providing decision making that is as inclusive as possible. To lead change does not require charisma, but it does require basic

managerial or transactional competence, a clear sense of what must be accomplished with the ability to let change evolve, and the ability to distinguish among differing bottom-up, top-down, and center-out strategies. Leading systems starts in one's home organization with the ability to set up high-quality professional environments in which less "leadership" is required so that "leaders" can spend more time collaborating with sister organizations, the public, and other sectors. Leading ethically requires not only clear principles and integrity but also, in the public sector, with its high standards, a sense of duty, spirit, sustainability, and even sacrifice on occasion; such leadership tends to be built on superior self-knowledge and a sense of optimism infused with energy and perseverance.

It is also important to remember that, with the exception of horizontal and collaborative leadership, this review has emphasized individual leadership within an organizational context—a valuable perspective, but not the only perspective. Although usually perceived through individuals, leadership is a group process. Indeed, the literature on contemporary leadership emphasizes the idea that leadership itself is constantly being socially constructed, making it both subjective and a moving target.

Public administration scholars can learn from the broader literature, but mainstream leadership scholars can also learn from public sector studies. Scholars can study the effects of and formulate prescriptions about the challenges for administrative leaders that are created by, among other things, performance and accountability pressures in a legal context; the demands to create trust in increasingly divisive environments; the ramifications of virtual communication on the leadership processes, where both transparency and privacy concerns are highly regulated; and the need to collaborate and build community without violating one's specific mandate. For example, interdisciplinary learning is growing in importance, and public leaders are naturally embedded in networks in which collaborative leadership is, or should be, highly practiced. Leaders in all sectors could learn a great deal by studying successful public administrators who span boundaries and extraorganizational roles in a complex political, legal, and social environments. And, of course, as the world changes, the lessons of leadership must be reinterpreted, and the specific mix and balance of competencies needed by public sector leaders must also be reevaluated.

Note

1. For a comprehensive review of the mainstream literature, see Bass (2008); for a comprehensive review of public sector organizational leadership, see Van Wart (2012); and for a review of the current research issues facing the field, see Van Wart (2011).

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Worksheet 1. Research Description

The main function of this worksheet is to explain what it is YOU are going to do. To do this well you need to: select a good topic, have a good idea what you are going to do and to solve a defined problem (that is so you know what outcome you want).

All the following steps are iterative and you must expect to go backwards and forwards many times before you get a set of answers with which you are happy. In addition, you must expect to have to read widely so that you fully understand the topic area and aspect that you have chosen. There is no short cut here it will all require deep and careful thinking.

1. TOPIC – What is your topic area? Name and briefly describe it.

2. ASPECT/SCOPE – What aspect of your topic area will you focus on? Name and briefly describe it.

3. PROBLEM – What is the problem theme that you want to focus on? This question is about focusing on a known issue or problem in the chosen aspect that you want to resolve. You could also usefully think of the cause of the problem at this stage as that might give you some insight as to how it might be resolved.

4. RATIONALE – Explain why it useful to solve this problem or determine if this project has any useful outcome. You should try to find some documented evidence that supports your view.

5 RESEARCH QUESTION – What is your research question? This must be based around your stated problem and the idea of worth. You are advised to carefully think through, once you have your question, what FORM the answer is to take.

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6. DESIRED OUTCOME – What is the expected or desired outcome from the Research Question That is, if you are successful in answering your research question what FORM will the answer take? Obviously the outcome must be related to the defined problem.

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7. TITLE – What will be the title of your project? You should now be in a position where you can write a clear project title.

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|--|

8. AIM – here we are looking for just one correctly formed and meaningful AIM

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9. OBJECTIVES – you should look for 3 or 4 objectives that achieve your aim and do so in a progressive manner

| |
|----|
| 1. |
| 2. |
| 3. |
| 4. |

Citing References in Text – some useful expressions

Introducing someone's ideas:

Bloggs (2002) suggests/argues/states/believes/concludes/proposes that ---
expresses/holds the view that ---

draws attention to ---
describes X as ---
describes how ---
refers to ---
takes the stance that ---
emphasises/stresses the need to/the importance of---

According to Bloggs (2002) ---

As stated/suggested/argued/proposed by Bloggs (2002) ---

There is a view/theory/argument that --- (Bloggs, 2002).

It has been suggested/stated/argued/proposed that --- (Bloggs, 2002)

One view/theory/argument/suggestion/proposal is that --- (Bloggs, 2002)

One view, expressed by Bloggs (2002) is that ---

Introducing an idea/theory that agrees with/has built on another:

This is supported by Smith (2003).
in line with the view/theory/suggestion of Smith (2003).
reflects the “ “ “

Smith (2003) accepts/supports/agrees with/concurs with this view/suggestion/theory.

A similar view is held by Smith (2003)
stance is taken by

This idea/theory has been extended/developed/taken further/built upon by Smith (2003).

Introducing an idea/theory that disagrees/contrasts with another:

This conflicts/contrasts with/is contrary to the view held by Smith (2003) that ---

This is not accepted by/has been challenged by Smith (2003), who argues that ---

Smith (2003), on the other hand/however/in contrast, suggests that ---

An alternative view/suggestion is that --- (Smith, 2003)
The opposite/a conflicting view is expressed by Smith (2003)

Example of Constructing an Argument in the Literature Review

Constructivism- Cognitive and Social

The first two generations of learning theories have been focused primarily on the individual learner and notion that knowledge is deposited to them in a didactic approach. In contrast, constructivism is concerned with personal construction of knowledge based on their interaction with their peers and the environment Anderson and Dron (2012). In this context learners are seen as knowledge producers rather than passive knowledge consumers, sentiments which are echoed in the work of Piaget (1970) in which he rejects the behaviourist and cognitivist views that fail to take into account the nature of evolution. Peterson (2012). In Piagetian theory knowledge should not be construed as a pre-existing reality or a reality separate from the learner, but should be seen as a result of the learner's own constructions based on experiences. Piaget (1972, pg. 95) believes that the constructivist method seek access to an "internal epistemology". Further to this Piaget (1970, pg.2) articulates that the individual's development of knowledge is a process of continual construction and reorganization.

Piaget (1970, 1972) work focuses on the individual level rather than a group of learners and as such this form of constructivism is often called Cognitive Constructivism. The implication of Piaget theory of learning on pedagogical practice is simple, "in order to teach one must first establish what students know, how they know it and how they feel about that aspect of their experience" Murphy (1996, pg. 31). Essentially, it suggests that teachers must develop a pedagogical approach that encourages discovery, problem-solving and critical thinking through interactions between teacher and learner, where the former would be guided towards achieving their explicit goals.

Vygotsky (1978, pg. 79-80) whose work is categorized as Social Constructivism, critiqued Piagetian theory for its assumption that processes of development are independent of learning and that learning is a "purely external process that is not actively involved in development". Vygotsky suggested that because of this assumption, which was inherent in the questions Piaget used in his experimental investigations, "it precludes the notion that learning may play a role in the course of development" Vygotsky (1978, pg. 80). He also critiqued the behaviourist's stimuli-response theories, suggesting that these theories reduce learning to habit formation and

assumed that “if someone learns to do any single thing well, he will also be able to do other entirely unrelated things well as a result of some secret connection” Vygotsky (1978, pg. 82).

Vygotsky (1978) had a different perception of human ability, he postulated that the mind has a set of specific capabilities, which are developed independently of each other and as such, advanced the theory on the Zone of Proximal Development (ZPD). This zone is defined by “the distance between the actual development level and the level of potential development” Vygotsky (1978, pg. 86). See Figure 5 below. He further expounds that the ZPD delineates the developmental levels which are in an embryonic state, that is, abilities in the progression of maturation.

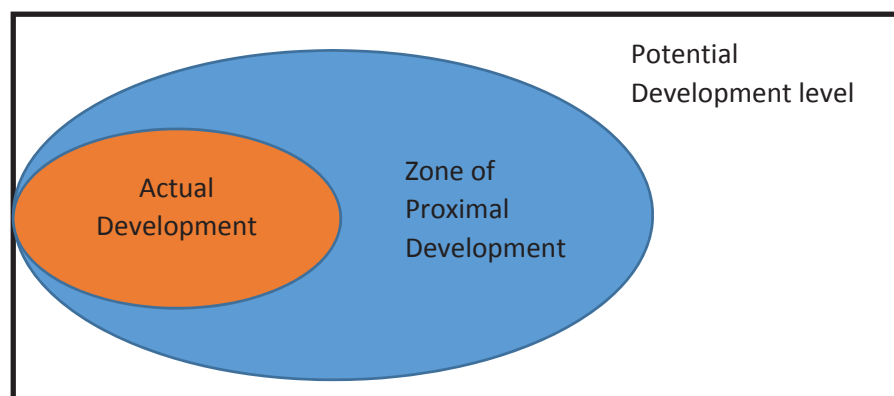


Figure 5. Zone of Proximal Development. Source: Author (2014)

The chief implication of Vygotsky’s work is that it steered the practice of teaching and learning towards a learner-centred approach. In order to move a learner from the ZPD to Actual development, they required adult guidance and collaboration with more capable peers. So that, what a student can do under guidance today will eventually be developmentally achieved and independence of thought would be gained. In addition, learning is enhanced when the learners interact with people and the environment in which they are situated.

Activity – Based on the Outline Notes construct a Paragraph arguing the points

| Concept | Notes | Source | Implications of your point of view |
|-------------------|--|---------------------------------|---|
| Defining Syllabus | "Description of the contents of a course of instruction and the order in which they are to be taught" | (Richards et al. 1992, p. 368). | A syllabus is useful because it specifies the content of the course to be taught. |
| | "syllabus is seen as being concerned essentially with the selection and grading of content, while methodology is concerned with the selection of learning tasks and activities". | Nunan (1988a) | |
| | defines syllabus as a general plan of activities that can be applied in a class to facilitate the learning process | Widdowson (1984, p. 26) | |
| | A syllabus is considered as an instrument by means of which the teacher can achieve a degree of accomplishment between needs and social or individual actions in the class. | Yalden (1984, p. 14) | |

A second term of interest for this project is that of syllabus. Broadly, syllabus has been defined as the "description of the contents of a course of instruction and the order in which they are to be taught" (Richards et al. 1992, p. 368). Nunan (1988a) agrees with this view, stating that "syllabus is seen as being concerned essentially with the selection and grading of content, while methodology is concerned with the selection of learning tasks and activities". From these definitions, it is apparent that syllabus is the part of a curriculum that deals with the content and sequencing of the courses within the program. Thus, syllabus is subordinated to curriculum. On the other hand, according to Yalden (1984, p. 14), syllabus is considered as an instrument by means of which the teacher can achieve a degree of accomplishment between needs and social or individual actions in the class. In yet a further definition, Widdowson (1984, p. 26) defines syllabus as a general plan of activities that can be applied in a class to facilitate the learning process. In general, it can now be concluded that syllabus is a part of the curriculum that concerns the selection and sequencing of content to be taught in a language program.

Project Title

Anglia Ruskin University

Introduction

Evidence of Issue/Rationale

Objectives

Research Question

Conclusion

Rationale

Research Aim

References