

Global Online Entrepreneurship: what do we know after over a decade (1997-2008) of scientific enquiry?

Abstract

The developments in global e-commerce have redefined the nature of international business in the last decade giving rise to the new forms of international business activity. With a view to increasing knowledge of the emergent field of online global entrepreneurship, we systematically analyse 45 articles that deal with online activities of internationalising firms. The methodology used for this review allows for analysis and purposefully compares a large number of recent studies on the main objective and type of research; theoretical frameworks, methodology and main findings and conclusions. The analysis reveals the most relevant contributions in the field and its drawbacks, limitations or major discrepancies. The review provides suggestions and implications for further research.

Keywords: global e-business, online entrepreneurship e-commerce, Internet,
internationalisation,

Global Online Entrepreneurship: what do we know after over a decade (1997-2008) of scientific enquiry?

Introduction

The developments in global e-commerce have redefined the nature of international business in the last decade (Karavic and Gregory, 2005). By facilitating a direct link between the firm and a foreign customer, the e-commerce technologies provide new possibilities to access and service foreign markets impacting the number of firms involved in international trade and the volumes of transactions (Clarke, 2008; Etemad and Wright, 1999). The online environments have given rise to a new breed of global enterprises, the e-commerce corporations (Singh and Kundu, 2002). Entrepreneurial opportunities presented by this new trading environment have also attracted some non-internet firms and the engagement in global online entrepreneurship has translated into accelerated and more widespread internationalisation (Arenius et al., 2006; Morgan-Thomas & Bridgewater, 2004). Yet, in spite of the practical relevance of online activities to international business firms, the research into global online entrepreneurship seems marginalized in the mainstream internationalisation literature. A state of the art review of the literature is needed to highlight the cumulative contribution of the field and move the research forward.

The paper addresses this research gap by identifying and examining the current empirical research on global online entrepreneurship (GOE). This work is positioned at the intersection of the international business, e-business and entrepreneurship research. We define global online entrepreneurship by rephrasing McDougall and Oviatt's definition (2000, pp: 903) of international entrepreneurship as a "...a combination of innovative, proactive and risk-seeking behaviour that involves using e-commerce technologies to cross national boundaries and

create value in organizations”. The definition encompasses e-commerce initiatives of existing international businesses as well as internationalisation of Internet new venture firms.

The objective of the review is to retrieve and evaluate the most current empirical research on online activities of international firms in order to (1) identify the key contributions and weaknesses; (2) offer insight into the state of the art of the field; (3) discuss the implications for future development of the field. The purpose is to provide a state of the art review with the hope of moving the field forward by integrating the existing literature.

The structure of this paper is as follows. A description of methodology for the systematic literature review is presented. This is then followed by a general assessment of the studies highlighting the key research objectives, theoretical frameworks, methodology and main findings and conclusions. The analysis reveals the most relevant contributions of the field and its drawbacks, limitations or major discrepancies. The review concludes with suggestions and implications for further research.

Method

The review focuses on the contemporary empirical literature in the field of global online entrepreneurship. To identify the relevant articles, we conducted a systematic keyword search of titles and abstracts in articles published in scholarly (refereed) journals in Ebsco, Web of Science, Science Direct databases. We used two sets of keywords: (1) those capturing e-commerce (online, Internet, virtual, cyberspace, web ADD) etc. (2) those capturing international business including global, international, world, foreign, multinational, export, cross-cultural. Once an article was identified, the following criteria were used to assess its eligibility: (1) published in English in an academic and peer reviewed journal; (2) empirical in

nature i.e. contains empirical data of either qualitative or quantitative form; (3) be closely related to international business and e-commerce; (4) be focused on firm level activities.

The review focuses on empirical studies and excludes important theoretical contributions, for example, Andersen (2005); Ekeledo and Sivakumar (2004); Hamill (1997); Karavdic and Gregory (2005); Petersen et al. (2002); Poon and Jevons, (1997); Samiee, (1998); Sharma (2005) or Singh and Kundu (2002). At a general level, studies eligible were those explicitly integrating theory and concepts from both international business and e-commerce. This criterion eliminates from the review single country studies not focusing on international business activity (e.g. Bollen et al., 2006; Chung et al., 2004; Hsieh et al., 2006; Lal, 1996; Rao et al., 2003; Sharma et al., 2004) or works where the e-commerce activities do not represent the focal construct of investigation (Gabriellsson and Kirplani, 2004). At a more specific level, the focus here is on a subset of information and communication technology (ICT) applications i.e. internet related e-business, and the review does not include works which examine the general effects of information and communications technologies on internationalisation (e.g. Andersen and Foss, 2005; Carpano and Rahman, 1998; Chari et al., 2007; Lal, 1996; Lal, 2004; Nahar et al., 2006; Santangelo, 2001). Also excluded are papers where the unit of analysis is not the firm but the consumer (e.g. Sincovics and Penz, 2006).

Results

The systematic review of databases generated 37 potentially relevant articles after excluding the duplicates. The manual search of their references generated a further 8 bringing the total to 45. Appendix A presents a list of the reviewed articles. To provide a general overview of the field, the contributions are categorized in terms of date of publication, publication type and the research setting (country). In terms of the chronological development of the field, the

empirical research into online internationalisation begins in 1997 with the seminal work by Hamill and Gregory (1997). As the popularity of the topic increases so does the number of publications reaching the peak of interest in 2006. The majority of studies are published in years 2004 (7 articles), 2005 (6 articles) and 2006 (9 articles). The articles appear in a variety of journals including, amongst others, international business outlets (Journal of International Marketing, Global Marketing Journal, International Business Review, Journal of International Business Studies, International Marketing Review); information technology (International Journal of Information Management, Journal of Organizational Computing and Electronic Commerce, The Information Society), entrepreneurship (Entrepreneurship and Regional Development, International Small Business Journal, Journal of International Entrepreneurship), economics (International Journal of Production Economics, Information Economics Policy, World Development). Clearly, the topic is interdisciplinary in nature and of interest to a broad spectrum of scholarly interests.

In terms of geographical locus of research, global online entrepreneurship (GOE) has been studied in a number of diverse country environments and a spectrum of cultures and languages. Although the majority of studies examine North American, UK or other English speaking countries (notably Australia, Ireland and New Zealand) there is some representation of the continental Europe (Italy, Germany, Spain) and other parts of the world including Asia (Jaw and Chen, 2006; Nguyen and Barrett, 2006), Latin America (Johnston and Wright, 2000) and Africa (Hinson and Sorensen, 2005; Moodley, 2003). Closer look at the studies reveals, however, that when the new entrepreneurial firms are the subject of analysis (Kim, 2003; Kotha et al., 2001; Loane et al., 2004; Loane, 2006; Luo et al., 2005; Rothaermel et al., 2006), the geographical focus narrows to reflect only the English-speaking world with a significant bias towards US firms. To an extent, the bias might reflect the digital divide: the

disproportionately large representation of US-based enterprises in the global e-commerce as well as first-mover advantages which the US firms tend to enjoy. However, there is a concern that the focus on US obscures sources of advantage that might be related to the country of origin, the use of English language as well as certain cultural biases, notably, the distinctively Western nature of much of the GOE research.

Having considered the general parameters of the reviewed articles, the remainder of the review presents the assessment of the studies. In order to evaluate the contributions, each study content was analysed with particular emphasis on the type of research, main objective, theoretical frameworks, methodology and main findings and conclusions.

Type of research. Considering the type of research, we organized the contributions into three groups: exploratory, descriptive and confirmatory. The first group consists of studies where the key objective is theory building where the data collection tends to involve qualitative methods. The second group of descriptive studies aims to provide a quantitative assessment of phenomenon under study by providing data on prevalence, frequency or intensity. Lastly, there are confirmatory contributions where the objective is to statistically verify a range of theory-driven hypotheses. The review sample includes 19 studies employing confirmatory design, 14 exploratory studies, 9 descriptive and 2 papers which include both case study and hypothesis testing (Chang and Wang, 2008; Jaw and Chen, 2006). In terms of the progression of the field, there is some evidence of evolution from descriptive and explorative studies which dominated in the early years (1997-2002) to more theoretically-driven exploratory and confirmatory studies.

Main research objective. In general terms, all studies deal with the impact of e-commerce on internationalisation of firms. There are, however, two distinctive themes within this research. Firstly, there is a small group of works devoted to the internationalisation of Internet new ventures and e-commerce corporations (Gabrielsson and Pelkonen, 2006; Kim, 2003; Kotha et al., 2001; Loane et al., 2004; Loane, 2006; Luo et al., 2005; Rothaermel et al., 2006). These studies focus on the activities of a new type of entrepreneurial firms – the e-commerce corporations (Singh and Kundu, 2002). Empirical research within this area addresses several specific objectives. For example, there is interest in the speed, patterns and the particular internationalisation strategies of Internet new ventures (Fortune and Aldrich, 2003; Kim, 2003; Loane et al. 2004; Luo et al., 2005) the degree of internationalisation and its antecedents (Kotha et al. 2001; Loane, 2006). Some authors consider market entry decisions of e-commerce corporations and the effects of cultural distance, market conditions or firm characteristics (Kim, 2003; Kotha et al., 2001; Luo et al., 2005; Rothaermel et al., 2006).

Secondly, there is interest in how the developments in e-commerce affect the internationalisation of non-Internet related firms. For example, studies examine the uses of the internet to international marketing (Bennett, 1997; Cerotti and Clifton, 1998; Hamill, Lewis and Cockril, Litchy and Rail, Moen et al, 2003, Niento and Frenandez, Pitis and Vloksy, 2000; Yip and Dempster); the impact of e-commerce on barriers to internationalisation (Arenius et al. 2006; Bennett, 1997; Berry and Brock, 2004; Hamill and Gregory, 1997; Hinson and Sorensen, 2006; Moodley and Morris, 2004; Yamin and Sincovics, 2006); or the barriers to the adoption of international e-commerce (Farhoomand et al. 2000; Lewis and Cockrill, 2002; Piscitello and Sgobbi, 2004; Tiessen et al., 2001).

Several studies have focused on the question of integration between the Internet and export strategy (Nguyen and Barrett, 2006; Moon and Jain, 2007; Prasad et al., 2001; Gregory and Karavic, 2007). The objective was to show the moderating role of the Internet activities on firms export performance. Building on export performance research, these studies typically consider the impact of the Internet alongside a range of external and internal factors influencing export strategy.

There has also been some interest in capturing and quantifying the impact of online entrepreneurship on the performance of firms. There are two different approaches to conceptualising and measuring the impact. Some studies model the use of the Internet as an intermediary variable moderating the effects of the environment on a firm's strategy and export performance (Moon and Jain, 2007; Nguyen and Barrett, 2006; Prasad et al., 2001) or a firm's performance (Kreamer et al., 2005). Others attempt to measure online entrepreneurship directly by quantifying the contribution of e-commerce to export performance. For example, Morgan-Thomas and Bridgewater (2004) measure the performance of online export channels and suggest a number of its antecedents.

The question of e-commerce adoption and its determinants has received some attention. For example, the level of assimilation of e-commerce has been investigated (Raymond et al., 2005; Saban and Rau, 2005). There has also been some interest in the different forms or levels of adoption and their impact on performance (Servais et al., 2007).

Theoretical frameworks

A certain number of conceptual approaches and theoretical frameworks can be found in the contemporary literature on global online entrepreneurship. The frameworks reflect the cross-

disciplinary nature of the field being derived from international business theories, entrepreneurship, management, marketing and information technology research. However, the extent to which these frameworks are explicitly proposed lacks uniformity and consistency and only a minority of studies can be considered highly theoretical. Encouragingly, the theory grounded contributions are increasingly present in published research and there is an upward trend towards more theory-driven analyses.

Several streams of international business theory are evident in the theoretical underpinnings of the reviewed studies. Possibly most pronounced are internationalisation theories of either Scandinavian school (Johnansson and Vahne, 1997) or the born global literature (Jones, 1999; McDougall and Oviatt, 2000) and, related to the internationalisation theory, the issues of barriers or stimulants to international growth (Leonidou, 1995a, 1995b). The internationalization literature seem to accompany particularly well the research questions concerning GOE's impact of firms' international growth (Bennett, 1997; Gabrielsson and Pelkonen, 2008; Hamill and Gregory, 1997) or the examination of the trajectories of international growth (Kim, 2003; Loane et al., 2004; Loane, 2006). In terms of specific theoretical constructs, liability of foreignness (Arenius et al., 2006) and the concept of psychic distance (Kim, 2003; Yamin and Sincovics, 2006) have received some attention. Interestingly, there is an ongoing debate whether the patterns of online internationalisation reflect the Scandinavian approach to internationalisation or whether they are more suited to the field of international entrepreneurship (Gabrielsson and Pelkonen, 2008; Kim, 2003).

Some authors adopt the entry mode perspective either explicitly (Rothaermel et al., 2006) or implicitly (Luo et al., 2005; Morgan-Thomas and Bridgewater, 2004). For example, entry mode approach, more specifically OLI (Dunning, 1980) served as the underpinning theory for

the study of internationalisation patterns of e-commerce corporations (Kotha et al., 2001). Similarly, a number of antecedents originating in entry mode literature has been considered to explain entry mode choice (Rothaermel et al., 2006). The concepts of risk, uncertainty as featured in this stream (Rothaermel et al., 2006) here. In particular, there is also some consideration for the cultural distance or psychic distance in the research (Kim, 2003). Although cultural distance seems relevant, one potential drawback affecting the generality of results concerns the cultural bias inherent in the studies: all studies considered in this review and concerned with entry mode approaches focused solely on US firms and their entry mode choices. It is questionable whether results on the impact of cultural distance obtained from one country perspective, and an English speaking country, can be extended to other firms in other cultural settings.

Some recent works build on export performance literature (Zou and Stan, 1998). For example, Prasad et al. (2001), Gregory et al. (2007) and Monn and Jain (2007) present export performance derived models of internet integration to suggest a number of antecedents of e-commerce integration as well as to show performance effect. This research is also to some extent influenced by resource-based views as well as the influence of marketing concepts of market orientation (Prasad et al., 2001).

Entrepreneurial theories are evident in several studies (Arenius et al. 2006; Piscitello and Sogbotti, 2004; Fortune and Aldrich, 2003; Loane et al., 2004). For example, Mostafa et al. (2006) considers the effects of entrepreneurial orientation and risk taking. In a similar vein, Ramsey and Ibbotson (2006) study of entrepreneurial firms in Ireland examines entrepreneurial orientation, identification of e-opportunities and planning. Within the context of entrepreneurship, the notions of networks, social capital and relationships are also explored

(Piscitello and Sgobbi, 2004; Houghton and Winklhofer, 2004). Worth noting is a strong explorative study by Houghton and Winklhofer (2004) which frames the problem of the effects of adoption of e-commerce for conflict with intermediaries within the authoritative control and relationship paradigms.

Studies examining the question of adoption of e-commerce and levels of adoption (Johnston and Wright, 2000; Haugh and Robson, 2005; Raymond et al. 2005) draw from innovation diffusion theories, typically Rogers (1983). There have also been some efforts to incorporate general management theories. For example, resource based view (Gregory et al., 2007) received some attention as does knowledge perspective to internationalisation (Nguyen and Barrett, 2006). Given the widely discussed effects of online internationalisation on the cost of transactions, transaction cost analysis has also been mentioned (Nieto and Fernandez, 2006).

Overall, the question of finding and fitting the phenomenon of GOE within a well-grounded theoretical framework represents a major challenge within this emerging field. The multiplicity of theoretical frameworks and weak theoretical foundations that characterise the majority of contributions are but one outcome of the researcher's struggle with suited theoretical frames. An interesting dilemma is to what extent this struggle highlights the inadequacy of the existing theories or the novelty and paradigm breaking nature of GOE. To illustrate, most of existing IB research on technology and innovation deals with product innovation and not the innovation of business processes. Consequently, there is a difficulty in adopting innovation perspective from IB to the phenomenon of GOE.

Methodological approaches in GOE

A wide array of research methods have been used to capture GOE reflecting the complex nature of the phenomenon as well as the diverse research objectives. The reviewed papers

include explorative, theory building studies (Arenius et al., 2006; Yamin and Sincovics, 2006); descriptive analyses (Bennett, 1997) and confirmatory studies (Morgan-Thomas and Bridgewater, 2004). Although quantitative approaches prevail, these include a significant number of descriptive studies aimed at providing an illustration for the prevalence of a phenomenon, for example, certain psychological barriers to GOE adoption (Bennett, 1997; Moodley and Morris, 2004) or the patterns or forms of GOE (Lituchy and Rail, 2001). Many of the qualitative, case-study approaches could also be considered descriptive given the lack of underpinning theory. In essence, the overall assessment of methodological approaches highlights the emerging nature of the field.

In terms of the data sources, most studies use primary collected via surveys or interview. An exception to this general pattern are studies where the data was collected through web-content analysis and searches of secondary information such as firms' reports, press etc (Kim, 2003; Luo et al., 2005). In addition, some authors relied on secondary data from panel surveys of industry and used proxy measures from the data collected for other purposes (Haugh and Robson, 2005; Niento and Fernandez, 2006). Interestingly, there is not much evidence of triangulation of sources with most research relying on a single informant, interview or questionnaire.

In terms of the coverage of different industries, the reviewed literature demonstrates a degree of bias towards certain sectors. In fact, there seem to be two approaches to samples: the research samples include either a wide cross-section of industries (Moon and Jain, 2007; Morgan-Thomas and Bridgewater, 2004) or the studies tend to focus on knowledge-intensive or high-tech sectors (Arenius et al., 2006; Kim, 2003; Loane, 2004). The cross-sectional design is rarely defended either in terms of its applicability or the choice/formulation of

industry groups. The bias towards high-tech industries can be traced to the epistemological origins of the field and the association with born global firms and international entrepreneurship. Incidentally, these two fields are also mostly associated with these sectors (Rialp et al., 2005).

A very positive aspect of the empirical research concerns the geographical distribution of studies. In terms of global online activities of traditional (non-internet) firms, there is an encouraging spread of results. Aside of the usual suspects of (English-speaking world) there is evidence from other parts of Europe (Italy, Germany, Spain, Norway, Denmark). The firms investigated have been found also in Asia (Vietnam, India, Taiwan, Japan), Latin America (Mexico) and encouragingly, and somewhat against the notion of digital divide, in Africa (Ghana, South Africa). However, the geopolitical spread of research does not seem to apply to the phenomenon of e-commerce cooperation which seems to be limited to English-speaking North America, UK, Ireland, New Zealand and Australia. Future research could devote more effort to identify cases of global e-entrepreneurship in other parts of the world.

The data, either in the form of survey questions or interviews, is collected from key groups of individuals (MD, export managers) usually in charge of the internationalisation/export processes. Mail surveys dominate. Where surveys have been used, samples tended to be small. For example, a significant proportion of the reviewed studies has sample sizes of around a 100 respondents and in only three articles did the sample exceeded 500 (Jaw and Chen, 2008; Kraemer et al., 2005; Morgan-Thomas and Bridgewater, 2004). The average sample size presents some concern given the large number of variables investigated and the multivariate technique used. From the standpoint of statistical validity of results, it could be expected that larger samples are employed to allow for the estimation of the complex models.

Aside of sample sizes, sampling procedures are also questionable: responding firms tend to be chosen for convenience rather than generalisation. The compounded problems of sample sizes, sampling procedures and representativeness open avenues for future research: there is need for adoption of the probability-based approaches to sampling, large samples and a finely defined industry focus.

The question of measurement represents another key concern. The extent to which the variables investigated are defined and validated, as well as the number and complexity of the proposed measurement scales vary greatly between the studies. Single indicator measures prevail upon multiple-scales, although some analyses employ scales that have been previously published and validated (Prasad et al., 2001), and there is a growing trend towards the use of multiple indicators (Gregory et al, 2007; Moon and Jain, 2007; Nguyen and Barrett, 2006). Particular concerns apply to the focal variable of use or assimilation of e-commerce, the key construct in this emerging field. Despite the recognition that levels of adoption matter (Raymond et al., 2005), a large proportion of studies define it only in very broad terms and capture with single estimators. In the simplest format, for example, some authors use a basic distinction between users and non-users of web-sites, assuming that each group is homogeneous and that all levels of use and types of use are seen as uniform (Bennett, 1997). Later studies mark an important methodological development: departure from dichotomous scales of integration towards more precise ordinal measures of business models. For example, some model assimilation (Raymond et al., 2005), types of strategy (Servais et al., 2007) or the level of implementation (Saban and Rau, 2005). Worryingly, there is no consistency in the definition and operationalization of this focal variable and the variations in measurement make it difficult to compare and contrasts the results undermining the collective contribution of the filed.

In terms of data analysis, there seems some progression from descriptive approaches based on frequency analysis (Bennett, 1997, Lituchy and Rail, 2001), to comparative approaches using T-tests or ANOVAs (Servais et al. 2007). More recently, multivariate techniques and SEM have started to be employed on larger samples (Morgan-Thomas and Bridgewater, 2004; Moon and Jain, 2007; Nguyen and Barrett, 2006).

Concerning the qualitative investigations making use of case-study based approach, interviews prevail although a certain degree of triangulation of data sources exist. There is a worry about the lack of research protocols particularly with reference to the selection of cases. The cases tend to be descriptive and presented in an exploratory and highly narrative manner. This adds to the problem of generalability. One positive development is the use of multiple cases (Houghton and Winklhofer, 2004, Loane et al., 2004) and also longitudinal case studies (Gabrielsson and Pelkonen, 2008).

In summary, it can be argued that more effort could be devoted to the design and implementation of the empirical studies. In a quantitative context, one possible avenue for improvement concerns the sampling procedures: probability sampling with an emphasis of representatives and, possibly in parallel, more specific focus on industry context would be welcome. More deliberate selection of case-studies and greater emphasis on theory would enhance the qualitative contributions. Given the dynamic nature of international entrepreneurship in general (Jones and Coviello, 2004) and global online entrepreneurship in particular, there is a dire need for longitudinal studies both in qualitative and quantitative settings.

Key findings and implications

Whilst each study provides a detailed examination of research findings, this section highlights some general patterns and commonalities. The discussion is organized around major themes and highlights conclusions as well as points of disagreement.

Global online entrepreneurship and internationalisation dynamics. The first problem concerns the effects of GOE on the dynamics of internationalisation. Many agree that for some enterprises the use of e-commerce means faster and more widespread internationalisation (Kim, 2003; Morgan-Thomas and Bridgewater, 2004). The literature discusses several mechanisms generating the acceleration in global growth. For example, online internationalisation can act as a resource leverage (Arenius et al., 2006); learning devices alleviating the impact of psychic distance and knowledge barriers to internationalisation (Nguyen and Barrett, 2006; Yamin and Sincovics, 2006); facilitator for network connections and platforms for enhanced relationships (Chang and Wang, 2008; Houghton and Winklhofer, 2004); a means for increasing corporate visibility (Cerotti and Clifton, 1998; Moen et al., 2003). In general, there seems to be some consensus that e-commerce is complementary to and not a substitute for conventional internationalisation. In particular, GOE seems conducive to rapid internationalisation strategies, specifically those associated with international entrepreneurship and born global phenomenon (Gabrielsson and Pelkonen, 2008).

The results concerning the relationship between the level of internationalisation and the firm's reliance on GOE are somewhat inconclusive. Whilst some discover that the level of internationalization and e-commerce adoption go hand in hand (Clarke, 2008; Jaw and Chen, 2008; Kraemer et al., 2005); others find no association (Nieto and Fernandez, 2006). The

question of the strength of relationship between a firm's internationalisation and the use of e-commerce as well as the direction of the causal link (if any) deserve more attention. In particular, there is an interesting conundrum whether internationalisation precedes GOE as suggested by some (Morgan-Thomas and Bridgewater, 2004) or whether the use of technology represents one of the preconditions for rapid internationalisation. The issue remains unresolved partly due to the problems inherent in the measurement and conceptualisation of e-commerce. The question of fitting e-commerce activities into the existing thinking in internationalisation seems problematic. For example, some consider GOE to be a distinct internationalisation channel and model its contribution to international performance separately, for example, as online export performance. Others consider the internet to be a moderator for other activities within the firm such as knowledge acquisition or marketing strategy. These studies do not provide a conclusive assessment of the value generated by the internet and therefore make it difficult to judge whether and how does the internet generate value. Both approaches are difficult to compare and contrast making cumulative assessment hard.

Another issue of contention concerns the patterns of online internationalisation. The question is whether these patterns can be best described as gradual, following the Upsala model of internationalisation (Johanson and Vahlne, 1977), or whether they are better explained by born global patterns (Jones, 1999). There is some empirical evidence to show that foreign market entries in the virtual marketplace are much more dynamic and widespread, often being separated by months rather than years. The compression of internationalisation in time as illustrated by the studies of e-commerce corporations (Kim, 2003) provides a strong support for the born global school. However, the authors argue that psychic distance still plays an important role in entry decisions and that when considered in longer perspectives, the gradual,

constraints of resource and psychic distance patterns do seem to fit the Upsala thinking (Gabrielsson and Pelkonen, 2008). More research employing longitudinal designs is required to resolve these issues. Given that language represents an important component of psychic distance and that what we know about the effects of culture is based, so far, on the English-speaking world, more research is required into the activities of firms from non-English speaking countries.

One area of disagreement concerns the antecedents of a firm's participation in GEO. Research shows clear variations in the range and the nature of benefits attained from online internationalization (Morgan-Thomas and Bridgewater, 2004). There is a certain degree of empirical controversy and debate amongst the researchers concerning the variety and disparity of factors associated with adoption and success in GOE. There is some agreement that factors internal to the firm, such as product online transferability, IT capabilities or management commitment or market orientation play an important function in explaining online export performance (Moon and Jain, 2007; Gregory et al. 2007). Research also identifies a number of factors external to the firm which are also of relevance. For example, the external demand for e-commerce seems to be a significant moderator of adoption and effectiveness of GOE (Gregory et al., 2007). Within the context of internal factors, the length of export experience represents an interesting conundrum. A number of studies including Morgan-Thomas and Bridgewater (2004) and Moon and Jain (2007) have found that the length of export experience to be inversely correlated with the level of reliance on GOE and its contribution to export performance. There is an interesting parallel between this finding and the notions of time compression found in international entrepreneurship literature (Jones and Coviello, 2004). It seems that advantages of newness (Autio et al., 2000) apply to the global online

entrepreneurship too. More attention could be devoted to contrasting and comparing the dynamics of online internationalisation with conventional internationalisation.

Conclusion

The purpose of this paper is to provide a review of the empirical literature in the emerging field of online global entrepreneurship. We systematically analysed 46 papers as the basis for surveying the state of the art of this research stream. The review of literature provides a critical assessment of the most relevant benefits and potential drawbacks and highlights possible avenues for further research.

The assessment leads to the following conclusions. Consistently with the emerging nature of this field of enquiry, much of the identified literature seems exploratory and descriptive. There has been notable absence of solid theoretical frameworks which would guide the analysis. The descriptive studies coincided with a shortage of theory building approaches. There are further problems with measurement and the design of the research samples. Lack of longitudinal studies, both quantitative and qualitative, represents a particular shortcoming given the dynamic nature of the field.

Several directions are proposed to move the field forward. Better application of theory and search for new theories to explain the phenomenon is called for. Promising avenues include entrepreneurship research, IT theories as well as general management theories. The question of business process innovation might present some promise. Empirical analyses could be enhanced by adopting more defined and sophisticated operational definitions of constructs. Efforts could be devoted to capturing the different forms of GOE, the levels of firm/s engagement in GEO, and the performance outcomes of this engagement. One promising

direction in that quest might come from the field of IT which has moved in that direction (Barua et al., 2005). Finally, given the dynamic nature of GEO and the unresolved issues of causality, more longitudinal studies are called for.

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Appendix A: Overview of the reviewed studies

Author	Location	Method
Arenius et al. (2006)	Finland	Case study
Bennett (1997)	UK	Survey
Berry and Brock (2004)	Germany	Survey
Cerotti and Clifton (1998)	Australia	Case study
Chang and Wang (2008)	Taiwan	Mixed
Clarke (2008)	Eastern Europe and Central Asia	Secondary data
Farhoomand et al. (2000)	Finland and Hong Kong	Case study
Fortune and Aldrich (2003)	US	Case study
Gabrielsson and Pelkonen(2008)	Sweden and Finland	Case study
Gregory et al. (2007)	Australia	Survey
Hamill and Gregory (1997)	UK	Survey
Haugh and Robson (2005)	UK	Survey
Hinson and Abor (2005)	Ghana	Survey
Hinson and Sorensen (2006)	Ghana	Survey
Houghton and Winklhofer (2004)	UK	Case study
Jaw and Chen(2006)	Taiwan	Mixed
Johnston and Wright (2000)	Canada, Japan, China and Mexico	Case study
Kim (2003)	US	Secondary data
Kotha et al. (2001)	US	Secondary data
Kraemer et al. (2005)	Multi-country	Survey
Lewis and Cockrill (2002)	UK	Survey
Lituchy and Rail (2000)	Canada and US	Survey
Loane (2006)	Canada, Ireland, Australia and New Zealand	Case study

Loane McNaughton and Bell (2004)	Canada, Ireland, Australia and New Zealand	
Luo et al. (2005)	US	Secondary data
Moen (2002)	Norway	Survey
Moen et al. (2003)	Norway	Case study
Moodley (2003)	South Africa	Survey
Moodley and Morris (2004)	South Africa	Case study
Moon and Jain (2007)	US	Survey
Morgan-Thomas and Bridgewater (2004)	UK	Survey
Mostafa et al.(2006)	UK	Survey
Nguyen and Barrett (2006)	Vietnam	Survey
Nieto and Fernandez (2006)	Spain	Secondary data
Piscitello and Sgobbi (2004)	Italy	Case study
Pitis and Vloksy (2000)	US	Survey
Prasad et al. (2001)	US	Survey
Ramsey and Ibbotson (2006)	Ireland	Survey
Raymond et al. (2005)	Canada	Survey
Rothaermel et al. (2006)	US	Secondary data
Saban and Rau (2005)	US	Survey
Servais et al. (2006)(2007)	Denmark	
Tiessen et al. (2001)	Canada	Case study
Yamin and Sinkovics (2006)	UK	Case study
Yip and Dempster(2005)	Europe & US	Survey