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Toward a theory of international new venture survivability

In this longitudinal study, we explore in-depth how entrepreneurs acquire legitimacy for their new ventures in an attempt to internationalise and survive before and after the dot.com bubble. We adopted a longitudinal multiple-case study methodology for the purpose of theory building. Five firms were selected on the basis of purposeful sampling logic from a homogeneous empirical context: they were small, software firms from Scotland that internationalised and struggled for survival between 1999 and 2001. To explore these companies' critical events and episodes, the method of critical incident technique was employed. The method of constructing typologies by reduction was employed to advance the typology of hype defined as the overall sentiment of the environmental context, within which the firm is embedded, about the future. Grounded in data, there emerged a middle-range theory of international new venture survivability that postulates that the closer the new venture is to the hype, the higher the likelihood of failure. Several implications to the theory of new venture legitimacy could be singled out. The paper makes an attempt to understand the nature of a legitimacy threshold. The data in the study points to the continuous nature of the legitimacy threshold and suggest that it may be defined by the time when the emergent industry moves away from hype towards risk decision making settings. A set of propositions is put forward to stimulate future research in the area of new venture legitimacy.

Keywords: International new venture, legitimacy, hype, survivability, critical incident, theory building

1. Introduction

In the period from the mid-1990s to 2000 a widespread belief was emerging that the world was in the grips of an e-business revolution (Coltman *et al.*, 2001). The future prospects, sometimes even exaggerated, of a technology, an innovation, a market, or a product gave birth to several myths regarding the new economy. Visionary predictions of the e-business, like brands will die, prices will fall, and middlemen will die were driving the valuation of virtual firms to the level of the dot.com bubble (Coltman *et al.*, 2001) that burst in 2000. Just because an idea is oversold does not mean there is not a grain of truth in it. The OECD (2001) report concluded that the information and communication technology have the potential to contribute to more rapid growth and productivity gains in OECD economies in the years to come. Moreover, it regards 'the information and communication technology as transforming economic activity, as the steam engine, railways and electricity' OECD (2001, p. 27).

In this context, small high-technology firms are seen as engines of economic growth, trying to derive their profits from international activities right from their inception (Oviatt and McDougall, 2005). At the same time, these international high-growth high-technology ventures resemble the firms that venture capitalists will usually back because of the potential for very high gains in combination with the availability of early exit strategies

(www.nvca.org). Decisions related to starting a new high-technology venture or investing in such a venture are made under conditions of technology and market uncertainty. In the early stages of the rollout of a new technology, the possible outcomes of such decisions and the probability of those outcomes are unknown (Alvarez and Barney, 2005), and market signals are not reliable (Coltman *et al.*, 2001; OECD, 2001). One of the challenges for decision makers when an industry is not clearly established and lacks legitimacy is to develop relevant performance benchmarks (Lovallo and Kahneman, 2003). As a result, unrealistic expectations are set that could not be always met, as the burst of the dot.com bubble demonstrated.

The present study is positioned within the new venture legitimacy literature. Following the call for further longitudinal, qualitative research in order to explore the legitimation process of new ventures (Zimmerman and Zeitz, 2002), as well as the call for exploring the survivability among international new ventures Zahra (2005), in this study, we are trying to further the understanding of *how* international new ventures went about acquiring their legitimacy by exploring rapid internationalisation of five small software companies during the dot.com bubble. Driven by the nature of the research question, we adopted a longitudinal multiple-case study methodology for the purpose of theory building. Five firms were selected on the basis of purposeful sampling logic from a homogeneous empirical context: they were small, software firms from Scotland that internationalised and struggled for survival between 1999 and 2001. To explore these companies' critical events and episodes, the method of critical incident technique was employed. In total, twenty-three semi-structured in-depth interviews were conducted with company directors and their stakeholders, yielding approximately 150 pages of transcribed notes. Emerging from this research data, a middle-range theory of new venture survivability is put forward to encourage, *inter alia*, a dynamic scholarly conversation and research on survival of new ventures.

2. Theoretical background

Liability of newness (Stinchcombe, 1965) and liability of foreignness (Zaheer, 1995) are the primary concerns of international new ventures in the early years of their existence (Zahra, 2005). These uncertainties are compounded when industries these ventures operate in are in their formative years (Aldrich and Fiol, 1994). In these contexts, both entrepreneurs and their financial backers have difficulties in understanding the nature of these new ventures, making realistic predictions about the markets growth potential, and learning and adjusting their

behaviours as the industries emerge. As for example Zimmerman and Zeitz (2002) maintain, the IT industry – in particular, software and dot.com companies – had been based significantly on legitimacy, not just hard economic analysis.

Legitimacy is viewed as playing a key role in overcoming the above liabilities. For example, Stinchcombe (1965) describes legitimacy as an antidote for the liability of newness, whereas Zimmerman and Zeitz (2002) view legitimacy as an important resource for gaining other resources. We define legitimacy as ‘a generalised perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, beliefs, and definitions’ (Suchman 1995, p. 574). Four strategies for acquiring legitimacy available to new ventures could be identified: conformance, selection, and manipulation (Suchman, 1995), and creation (Zimmerman and Zeitz, 2002). Conformance involves seeking legitimacy by achieving conformity with the demands and expectations of the existing social structure in which the venture is currently positioned, i.e. it involves ‘following the rules’. As argued by Zimmerman and Zeitz (2002), the new venture generally has little power and few resources to challenge the established social structure. Selection strategy allows the new venture to select a favourable geographic location where there are organisations that address similar rules, norms, values and models and may provide a new venture with legitimacy, e.g., software ventures locating in Silicon Valley or Silicon Glen.

Manipulation strategy involves making changes in the environment to achieve consistency between the venture and its environment. Oliver describes manipulation as ‘the purposeful and opportunistic attempt to co-opt, influence, or control institutional pressures and evaluations’ (1991, p. 157). For example, a new venture can manipulate its environment by teaming with successful, well-established organisations (e.g., Das and He, 2006; Rao *et al.*, 2008; Stuart *et al.*, 1999). Creation strategy involves creating new operating practices, models, and ideas. According to Zimmerman and Zeitz (2002), this strategy especially is evident during the introductory stage of new industries and is most strategic of the above strategies.

As Zimmerman and Zeitz (2002) further maintain, the research on the topic of new venture legitimacy is in its infancy. Several recent empirical studies are trying to address this early criticism (e.g., Andries and Debackere, 2007; Bitektine, 2008; Delmar and Shane 2004; Rao *et al.*, 2008; Sanders and Boivie, 2004; Zott and Huy, 2007). Delmar and Shane (2004) argue

that legitimacy enhances the ability of founders to create social ties with external stakeholders and initiate routines to transfer resources. They analysed life stories of 223 new ventures and found that undertaking activities to generate legitimacy both enhance new venture survival and facilitate transition to other form of organising activities.

Sanders and Boivie (2004) studied publicly traded US Internet firms and found that firm market valuation was strongly associated with corporate governance characteristics, e.g. board structure and venture capital participation. Rao *et al.* (2008) examined the stock market gains of all products introduced between 1982 and 2002 by all public firms in the US biotechnology industry and found that new ventures that acquired legitimacy externally by forming alliances with established firms gained more from their new products than new ventures that did not form such alliances. Andries and Debackere (2007) investigated the relationship between adaptation and performance on a sample of 117 independent new ventures and business units and found that adaptation is beneficial in less mature, capital-intensive and high-velocity industries but not so in more mature, stable industries.

Zott and Huy (2007) explored which symbolic actions entrepreneurs performed in order to attract resources and when and why these actions are effective in acquiring resources. They identified four symbolic action categories that facilitate the resource acquisition: conveying entrepreneur's personal credibility, professional organising, organisational achievement, and quality of stakeholder relationships. Bitektine (2008) explored strategies that well-established organisations use to build legitimacy-based barriers to entry into their domain, and developed a typology of legitimacy manipulation strategies: change relative importance of legitimacy dimensions, and ultimately achieve legitimacy threshold '...below which the new venture struggles for existence and probably will perish and above which the new venture can achieve further gains in legitimacy and resources' (Zimmerman and Zeitz, 2002, p.427). In other words, there is a chance for a new venture to survive and grow should it reach the legitimacy threshold.

The present study is in response to the call for further longitudinal, qualitative research in order to explore the legitimation process of new ventures (Zimmerman and Zeitz, 2002), as well as the call for exploring the survivability among international new ventures (Zahra, 2005). Zimmerman and Zeitz (2002) call for further longitudinal, qualitative research in order to explore various types of legitimacy and document the legitimation process by focusing on a

single or small group of new ventures (p. 429). According to Zimmerman and Zeitz, the understanding of legitimation process in new ventures could be advanced, inter alia, by examining the effects of sources of legitimacy on resource acquisition, the sequence in which the sources of legitimacy are acquired, and the conditions under which the legitimacy strategies are most effective.

The present study is also in response to a call for future research to advance the theory of international new ventures put forward by Zahra (2005). According to Zahra, little is known about the survivability among international new ventures, and how and why these ventures change their strategic direction. Zahra (2005) further maintains that 'it is important to investigate the conditions that encourage international new ventures to [change], and to document the consequences of these changes for their survival and financial performance' (p.23). In the same vein, Aldrich and Fiol (1994) suggest that ventures that straggled and did not succeed in becoming legitimized provide the best evidence for testing the context of industry formation, as well as of new venture emergence.

Several recent papers are trying to fill in this gap (Gabrielsson and Gabrielsson, 2009; Mudambi and Zahra, 2007; Sapienza *et al.*, 2006). For example, Sapienza *et al.* (2006) in their conceptual paper distinguish between growth and survival as outcomes of INVs. These authors further posit that early internationalisation threatens firm survival due to the lack of necessary capabilities and positional advantages. Mudambi and Zahra (2007) compared the performance of new ventures that adopt international new venture mode of entry into foreign market with those that follow a sequential approach to internationalisation. In contrast to Sapienza *et al.*'s (2006) theorising, Mudambi and Zahra found that an INV strategy to internationalisation is no more likely to fail than a sequential approach to internationalisation. Gabrielsson and Gabrielsson (2009) explored in depth the survival and failure among five Finish software international new ventures. These authors found that dynamic capabilities are more critical to the survival of INVs than the amount of resources they possess.

In spite of the above attempts, the research on survivability among international new ventures is in its infancy. In the present study, following the above research calls we are trying to further our understanding of *how* international new ventures go about acquiring their legitimacy by exploring rapid internationalisation of five small software companies during the dot.com bubble.

3. Research methodology

Driven by the nature of the research question, that is, to explore in-depth how international new ventures acquire legitimacy and survive, a multiple-case study strategy was adopted for the purpose of theory building (Eisenhardt, 1989; Yin, 2003). A qualitative inquiry such as the present study relies on purposeful sampling, the logic and power of which lie in selecting information-rich cases for study in depth (Eisenhardt, 1989). At the outset of our research quest, we were aware of the challenges that lay ahead in terms of gaining access to failed companies and collecting reliable and valid data. One of the challenges when studying this kind of companies is to minimize the attribution errors, i.e. when people tend to misattribute the cause of the events (Lovallo and Kahneman, 2003). According to Lovallo and Kahneman (2003), the typical pattern of such attribution errors is for people to take credit for positive outcomes and to attribute negative outcomes to external factors, no matter what their true cause is.

Minimizing the effect of such attribution errors contributes to the enhancement of the construct validity of the research. Hence, the study was confined to a homogeneous empirical context. Several case study strategies were employed to develop sampling selection criteria. One strategy was to control for the effect of the competitive and remote environment on selected cases, like for example, legislation, market size, market structure across industries and countries, and effect of time. The other strategy was to control for the potential effect of resource bias; small being defined as a company having less than 100 employees (Storey, 1994). And the third was to ensure that critical events were transparently observable in all cases, e.g., rapid internationalisation, and struggle for survival. Data triangulation also helped minimize the attribution errors by corroborating the data collected from entrepreneurs with the data collected from their stakeholders and other sources (Denzin, 1970). Five case companies were purposefully selected on the above identified criteria. The case companies were *small*, were operating in *software sector in Scotland, internationalised, survived or ceased trading during 1999-2001*.¹ Table 1 provides a brief summary of the cases. For

¹ As one of recent crises that occurred during 1999-2003, dot.com bubble is of greater interest due to its facets. During that period one could witness hyper growth of the information and communication technology sector whose overall revenue growth peaked in 2000, then rapidly declined over the following year with the bursting of the dot.com bubble, and afterward remained essentially flat until 2003 (Coltman *et al.*, 2001).

confidentiality reasons, interviewees' and companies' names are disguised throughout the paper.

Insert Table 1 about here

Data were collected from three sources: secondary sources, in-depth interviews with companies' CEOs, and companies' stakeholders, e.g. VCs, public policy advisors, strategy advisors, liquidators, and business correspondents, in four phases: from 2000 through 2003. To enhance the reliability of the research, databases were created for each case to organize and document data collected. Table 2 identifies the respondents who took part in this longitudinal study, as well as the association a particular stakeholder had with the case study companies.

As decisions about internationalisation were fairly recent at the time of data collection, the critical incident technique (CIT) seemed appropriate to collect and analyse the data (Chell, 1998; Flanagan, 1954). Chell defined CIT as a '...qualitative interview procedure that facilitates the investigation of significant occurrences (events, incidents, processes or issues) identified by respondent, the way they are managed, and the outcomes in terms of perceived effects' (1998, p. 56). For an incident to be critical, it has to deviate significantly, either positively or negatively, from what is normal or expected (Edvardsson, 1992). An interview guide was designed to ensure some comparativeness between the responses, and allow sufficient control over the interview to ensure that the research objectives were met. The average interview lasted approximately sixty minutes. All interviews were recorded with interviewee's permission, and transcribed verbatim immediately after. The write-ups of the cases were sent to respective interviewees for feedback and comments, thus contributing to the construct validity of the research. Twenty-three interviews were conducted, including follow-ups, yielding approximately 150 pages of interview data. As the research unfolded, primary data were added to the databases as well.

Insert Table 2 about here

An important feature of qualitative research is that there is significant overlap between the data collection and analysis phases (Eisenhardt, 1989; Glaser, 1978). The first step in the data analysis process according to CIT is to describe the incidents (Flanagan, 1954). According to

Dubin (1978), the very essence of description is to name the properties of things, and the more adequate the description, the greater the likelihood that the concepts derived from the description will be useful in subsequent theory building. The interviews were transcribed and transferred, along with initial database pertinent to each case, to QSR NVivo program that handles qualitative data analysis research projects. The exploration and description of each case was centred on critical events and started from the inception of the company. Quotes from interviews were used extensively to illustrate the events, incidents, processes and issues that had, to various degrees, an impact on the process of legitimisation.

The second step in the data analysis as per CIT is to choose a frame of reference so that it makes easier and more accurately to classify and analyze the data. Initially, the locale of events (Miles and Huberman, 1994) was identified, namely the entrepreneur, firm, home market, and international market levels. Then, four distinct time periods were identified that helped mapping the chronological flow of critical events, namely the emergence of new international business idea, international expansion, at a critical juncture, and beyond it. The above frames were structured in NVivo around the event listing matrix format that allowed a good look at what led to what, when and why (Miles and Huberman, 1994).

Third step in the data analysis is the category formulation, which represents an induction of categories from the basic data in the form of incidents (Flanagan, 1954). Within-case analysis was the basis for developing early constructs surrounding the critical events in the process of legitimation, and subsequent survival decisions, like for example *hype*. The content of the event listing matrix emerged after the initial 'free coding' or open coding (Glaser, 1978) for each case was completed, and each case was explored and described in detail using the event listing matrix (Miles and Huberman, 1994).

The last step in data analysis according to CIT is to determine the most appropriate level of specificity-generality to use in reporting the data. In this study, middle-range theorizing helped manage the complexity of the emergent legitimation process. According to Weick (1989, p. 521), middle-range theories are solutions to problems that contain a limited number of assumptions and considerable accuracy and detail in the problem specification. The iteration between emerging constructs, theory and data led to the emergence of the *middle-range theory of international new venture survivability* that postulates that *the closer the new*

venture is to the hype, the higher the likelihood of failure. The key elements of this emergent theory are discussed next.

4. Toward a theory of international new venture survivability

Empirical findings

A complete theory must contain four essential elements (Dubin, 1978). The first element is *what*: what factors (variables, constructs) logically should be considered as part of the explanation of the social or individual phenomena of interest (Whetten, 1989)? According to Whetten, there are two criteria for judging the extent to which the ‘right’ factors have been included: *comprehensiveness* (are all relevant factors included?) and *parsimony* (should some factors be deleted because they add little additional value to our understanding?).² The key constructs considered by the proposed theory of new business venture survivability are *new venture* and *hype*. They emerged from the data during the coding process moving from open coding towards selective coding.

By new venture we mean an innovation, new product, new technology, or new business idea. It is also pivotal to differentiate between new ventures that emerge within an institutionalized context and those that emerge within industries characterized by technical and market uncertainties, as well as goal ambiguity. The international new ventures studied in this paper refer to the latter type. In an uncertain environment, the probability distribution of outcomes yet to be created by exploiting a new venture is unknown (Alvarez and Barney 2005). In such an environment, different actors may make different choices with respect to the same technology, resulting in different outcomes (Carlaw *et al.*, 2006).

Grounded in data, hype is defined as the overall sentiment of the environmental context, within which the firm is embedded, about the future. The method of constructing typologies by reduction (Glaser, 1978) was employed to advance the typology of hype. By cross-tabulating the sentiment of the competitive (industry growth) and remote (economic growth) environments about the future, the typology of hype was generated (Figure 1): (i) delusional optimism; (ii) over-optimism; (iii) pessimism; and (iv) realism talk. The growth outlook in

² The principle of parsimony that came to be known as Ockham’s Razor was postulated by English philosopher William of Ockham. According to Ockham, it is pointless to do with more what can be done with less – *frustra fit per plura quod potest fieri per pauciora* – (Kemerling, 2002).

each environment is labelled as positive signals (+) and negative signals (-). The emergent typology of hype is based on two key assumptions. Firstly, it is assumed that signals from the competitive environment will have a stronger effect on firms' behaviour/forecasts (represented as wavy lines in each quadrant). Secondly, the overall outcome arises as a result of the interaction between individuals and the changes in behaviour which they induce in one another (Ormerod, 1998).

When the overall sentiment of the environmental context, within which the firm is embedded, about the future is positive (quadrants I and II, Figure 1), entrepreneurs, being influenced by other people's positive behaviour, will tend to hype, and be overoptimistic about the outcomes of their new ventures. In contrast to the above, an overall negative sentiment of the environment about the future (quadrant III, Figure 1) would lead to the opposite effect, i.e. to scepticism or pessimism. One might expect more realism when the sentiments about the future that emanate from competitive or remote environments have opposite signals (quadrant IV, Figure 1). For example, the OECD (2001) report demonstrated that a slowdown in the economy of the United States instilled a sense of realism into the debate, as well as putting an end to some exuberant economic behaviour. In this respect, Gabrielsson and Pelkonen (2008) also found that the cyclical nature of remote and competitive environments had a large impact on the international strategies of international new ventures that internationalized during 1990-2003.

Insert Figure 1 about here

The data also points to external and internal pressures as factors which lead to hyping behaviour in both business and investment communities. Derived from literature, for the purpose of the present study, hype is divided into two types: hyperbole (Coltman *et al.*, 2001) and vapourware (Bayus *et al.*, 2001; Haan, 2003). Hyperbole refers to a signal emanating from either competitive or remote environments about exaggerated future prospects of a technology, an innovation, a market, or a product. For example, Coltman *et al.* (2001) looked at visionary predictions of the e-business, like brands will die, prices will fall, and middlemen will die. The futuristic predictions that affected the interviewed companies were driven by prospects of the introduction of 3G mobile phones, adoption of smart cards, internet banking and data mining, to name a few: for instance, bank branches will disappear, third generation mobile phones will replace home computers, etc. For example:

'What was common to all our solutions was that people were using the Internet more and more in Finance as the way of communicating more cost-effectively with the customers. At that point there was even an idea to get rid of all branches; it will be all internet banking. But we found out that branch network was still an important part. So we were looking at where the common features of the systems we had built for insurers and some banks so that we can build a product round that. ...it happened that our product was too immature at that point' – the CEO of Finance-Software.

Vapourware is a signal emanated by companies to the market and refers to a false announcement of a new product in an attempt to deter entry (Haan, 2003). In the US vapourware even became an antitrust concern (for review see Levy 1997). The vapourware construct emerged as a recurrent theme throughout the analysis of cross-case data, and it was originated by one and the same company, which happened to be one of the largest software companies in the world. Four companies from the sample suffered to various degrees from this vapourware. The entrepreneurs who had experienced the vapourware stemmed from this large organisation described it as being just a “marketing hype”, “lot of clouds”, “spooking” and “bandits”:

'For a moment we thought maybe we could work with [this company] to the extent that [it] tends to go so far up in the enterprise. But it did not work, because [it] could not do the big systems. They just did not have the technology. Subsequently they introduced a technology called [...], which meant to be kind of whole enterprise wide technology ...marketing hype really' – the CEO of Finance-Software;

'One of the things you learn about the technology markets is that the big [enterprise] players spin awfully a lot about what is possible, and raise customer expectations. However, they consistently failed to deliver, and the markets became very sceptical. As a result, it became very difficult for someone who could actually deliver, to come along and penetrate the major market share. These companies put a lot of clouds, smoke, and actually prevent small businesses getting into the markets most of the time' – the CEO of Mobile-Software;

'One of the big factor that led to a decision to [de-institutionalise] was that [our strategic partner], continuing the development of the market place, started talking about the sorts of things that we were doing in their database product. This would have overlapped with what we did, and clearly would have killed the company. This intention spooked a lot of people, and the perception by some was that that was going to happen

sooner than later. In the company we held the impression that if we continue with the same strategy, then [our partner] will take away our business at the end. It actually turned out that they still have not included that functionality and have not released the database they were talking about back in 2000. These companies announce a lot of products they intend to develop which they never do, and they do this only to influence the market’ – the CEO of Data-Software;

‘Our trouble started in early 2000 with couple of events... with [our strategic partner] leaving who scrapped the smart card market and owed us money. We had a lot of good customers, apart from this company, who were bunch of bandits; seriously bad company’ – the CEO of Tool-Software.

The above emerged constructs, new venture and hype, attempt to explain the evolution of start-up firms or new ventures in established firms that decide to pursue new market opportunities in uncertain decision making situations where predictions, especially about net present value, are unreliable (Alvarez and Barney, 2005; Lovallo and Kahneman, 2003). As one venture capitalist explained:

‘If you go back three years now, the market was extremely bullish, and investors were willing to take very large risks, and also had an inflated idea of what companies might be worth. The big thing that we’ve been working on quite hard to improve for the last five years I guess was to get real views on the size and trends of the markets’ – the venture capitalist.

The second element of a theory is *how*: how the identified factors are related? By answering this question the researcher adds order to the conceptualisation by explicitly delineating patterns, and typically introduces causality (Whetten, 1989). According to Whetten (1989), together the *what* and *how* elements constitute the domain or subject of the theory. The data in this study suggest that hype moderates the emergence (discovery and exploitation) of a new venture. That is, the proximity to the hype reflects the degree of embeddedness of the firm within its environmental context. As the typology of hype suggests, when new business ventures are pursued or new demands are created in uncertain decision making situations, entrepreneurs will be prone to hype their business plans as there will be virtually no risk of being detected of such behaviour. As the company CEOs maintained:

‘We had to construct the business plan so that it would give VCs the rates of return to buy them into. So, we had to construct something that would say that we could do it for

£9 million, although we needed £18 million. In the end we received £6 million only...and all this backfired. At the board meeting we raised the issue whether our ambitious plans should be cut in line with the reduced funds, to which investors said that the plan should be executed as stated in the business plan’ – the CEO of Mobile-Software;

‘Our initial business plan was more realistic. The revised one was a bit ambitious, not to say the least, was the reality of it. But you have to pitch in that fashion in order to secure any investment at all. You have to be very positive about what you can do. Admittedly, you should not exaggerate, but you should not underplay either. And the projections you have to put in place in order to get investment, especially back in those days, were expected to be quite ambitious’ – the CEO of Project-Software.

The third element of a theory relates to *why*: what the underlying psychological, economic, or social dynamics are that justify the selection of factors and the proposed causal relationships (Whetten, 1989). According to Whetten (1989), the above are the theory’s assumptions. From an economic perspective, this study argues that hype and uncertainty are two sides of the same coin. Under uncertainty, according to Knight (1921), there is ‘no valid basis of any kind for classifying instances to determine probability from past experience or statistical calculation’ (p. 225). This is especially true when entrepreneurs are opening new markets or exploiting new technologies (Schumpeter 1934). When these kinds of entries are undertaken, the cash flow an entry is expected to generate (the mean of the distribution) and the rate at which the cash flow should be discounted over time (the variance of the distribution) are not known (Alvarez and Barney, 2005). In other words, net present value cannot be calculated under Knightian uncertainty. As one liquidator observed:

‘When I look at forecasts in the business plan that were used to get the initial funding I can say straight away: this is absolutely ridiculous; there is no way the company could grow at that pace. The whole thrust of a young technology business is to hype, if you like, to create large expectations about sales, and profit levels’ – the liquidator.

From a psychological perspective, decision-makers’ over-optimism can be traced both to cognitive biases and to organisational pressures (Lovallo and Kahneman, 2003). According to Lovallo and Kahneman (2003), the most prevalent of cognitive biases is anchoring. This is when, for example, the initial business plan accentuates the positive, and the subsequent analysis will be skewed towards over-optimism. Under organisational pressures, when

forecasts are critical in attracting funding, decision makers have big incentives to accentuate the positive and downplay the negative in laying out prospective outcomes. Lovallo and Kahneman (2003) further argue that this raises the odds that the projects chosen for investment will be those with the most overoptimistic forecasts – and hence the highest probability of disappointment. As one liquidator explained:

'It is the hype that generates VCs' money. When the things are not progressing quite as quickly as they wanted, in my experience, there tends not to be a lot of realism talk; there tends to be even more hype. Because usually what's happening is that suddenly they need more money than they thought. And the last thing they are going to do is to actually talk the situation down, and hype it a bit further' – the liquidator.

From a social perspective, it is maintained that the overall behaviour of individuals in a given setting depends on the interaction between individuals and the changes in behaviour which they induce in one another (Ormerod, 1998). According to Ormerod, positive feedback that generally rules the real world of the economy and society will lead to trends being reinforced rather than reversed. As the typology of hype suggests, when the overall sentiment of the environmental context about the future is positive, entrepreneurs, being influenced by other people's positive behaviour, will tend to hype and be overoptimistic about the outcomes of their ventures. Furthermore, entrepreneurs will find it financially advantageous, and often unavoidable, to fall in with the ideas of the market, even though they themselves are better instructed (Keynes, 1936). This self-reinforcing mechanism that creates hype, also leads to the creation of fashion. As the data suggest these two variables control each other in a loop. As one business strategy consultant noted:

'Hype is important as it creates fashion. At the same time, hype is driven by fashion. If you like, they are the two sides of the same coin. Hype releases the investment decisions, because it reduces the pain of failure, whereas human psychology of failure is ameliorated by fashion' – the business strategy consultant.

According to Keynes (1936), worldly wisdom teaches that it is far better for reputation to fail conventionally than to succeed unconventionally. That is, there are high emotional and professional costs associated with being the odd one out, as one business strategy consultant observed:

'It is not nearly so bad being killed on the first day of the Somme with twenty thousand other people than it is being killed on your own in no man's land because you went out

and stood up. The former is a glorious failure; the second is just an idiot thing to do. What happens in a hype driven market, people are making decisions because everybody else is doing it. The hype and fashion protect you from being one man odd out. If you feel in your heart and gut that this is all rubbish, but you still do it, because it is fashionable and hyped' – the business strategy consultant.

The last, but not least, element of a theory relates to *who, where, when*: these are temporal and contextual factors, which set the boundaries of generalizability, and as such constitute the range of the theory (Whetten, 1989). The context of the *theory of new venture survivability* is the process of emergence of a new venture in uncertain decision making situations. The process of emergence relates to the processes of discovery and exploitation of a new business venture (Davidsson, 2003). A new business venture can emerge as a start-up or in an established firm. Uncertainty is the effect of the process of emergence of *new* ventures, e.g. when entrepreneurs create new markets or exploit new technologies (Schumpeter, 1934).

With regard to temporal boundaries of the theory of new venture survivability, the theoretical effects of hype vary over time. That is, hype is unstable. As companies move away from hype towards risk decision making settings, more accurate information would come from the market that would make it possible to perform much needed statistical calculations, and therefore to make a distinction between hype and reality. That is, as the history of a new market or a new technology is being formed, the behaviour of various stakeholders will change accordingly.

The emergent theory

According to Dubin (1978, p.96), 'empirically relevant theory in the behavioural and social sciences is built upon the acceptance of the notion of relationship rather than of the notion of causality'. This does not mean that causality (or prediction) is of secondary or lower importance. It means a social and behavioural scientist employ a theory building strategy firstly aimed at improving understanding before seeking to improve prediction. In what follows, the units of the emergent theory, the law(s) of interaction that connects them, as well as the boundaries of the emergent theory and its system states will be discussed.

The units of the emergent theory are *new venture* and *hype*. These are latent or summative units that '...draw together a number of different properties of a thing and highlight one of the

most important' (Dubin 1978, p. 66). For example, INV is not just a new venture that internationalizes right from inception a new technology, but also is a *new* venture that seeks to acquire for example market, location, operational, and alliance legitimacies, as well as to establish a strategic posture for the first time (Nicholls-Nixon *et al.*, 2000) in order to mitigate the liability of newness and foreignness, and eventually reach a legitimacy threshold. The unit hype is seen as a signal in the form of hyperbole or vapourware as well as a delusional optimism or over-optimism over a certain event driven by uncertainty and shared/collective expectations.

The law of interaction connects the units of the theory, and itself is never measured (Dubin, 1978). In the present emergent theory *closer* and *higher the likelihood* is the connecting phrase. Degree of closeness could be seen through the lens of embeddedness, i.e., proximity to the hype reflects the degree of embeddedness of the firm within its environmental context. Embeddedness could be viewed as the on-going contextualization of economic exchange in social structures (Granovetter, 1985), creating economic value through three mechanisms: trust, fine-grained information transfer, and joint problem solving Uzzi (1996). Uzzi (1999) sees the synergy created from these mechanisms as 'unanimity of inference' (p. 488) that creates shared/collective expectations. Through embeddedness one may also explore at another level for example how a nation and sector context shapes the spread of norms and values and the receipt of innovation (Dacin *et al.*, 1999; Krippner and Alvarez, 2007).

The boundary of the theory is determined when the limiting values on the units comprising the theory are known (Dubin, 1978). Further, the boundary of the theory delineates its domain as being '...the territory over which we can make truth statements about the model and, therefore, about the values of the units composing the model' (Dubin, 1978, p. 134). For example, determinate limiting values of the international new venture unit are internationalisation gap, newness, foreignness, and knowledge intensity. As to the hype, the limiting values are technical uncertainty, market uncertainty, goal ambiguity, delusional optimism and over-optimism. In our process of theorising we turned to middle-range theories that are seen as models characterised by not too few, but at the same time not too many boundary-determining criteria (Dubin, 1978; Merton, 1957).

Before the state of the system is discussed, it is pivotal to address the notion of paradox in theory building. Dubin distinguishes between precision paradox and power paradox. Precision

paradox states that ‘it is possible to achieve high precision in predicting *when* changes in system states will occur and *what* states will succeed each other, without possessing knowledge of how the system operates’ (Dubin, 1978; p. 25; original emphasis). The power paradox deals with the question of creating models that ‘...are powerful in contributing to understanding, without providing, at the same time, precision in prediction’ (Dubin, 1978, p. 26).

In dealing with the precision paradox we turned to logical simplifications (Dubin, 1978) or coding families (Glaser, 1978) that are widely used in sociology to predict the change from one state to another, like for example uncertainty and risk, uncertain decision-making settings and risk decision-making settings,³ or new and established. As asserted earlier, as the history of a new market or a new technology is being formed, the stakeholders involved become more knowledgeable about the new technology or new market in question, and therefore can make more accurate predictions about their potential. That is, the state of the system moves from uncertain decision-making settings towards risk-decision making settings. In dealing with the power paradox, we were aware of the fact that by excluding crucial variables from the theory (e.g., degree of knowledge intensity, size, mode of start-up, board composition, presence of venture capital, to name a few) that may contribute significantly to an outcome, we have not limited the power of understanding of the operation of this system. As argued by Dubin (1978), oversimplification of a phenomenon contributes to a better understanding of the phenomenon, but it can not directly generate precise predictions. On the basis of the above, the following section sets the stage for the discussion and presentations of the propositions that are truth statements about a theory (Dubin, 1978), rather than development of hypothesis.

5. Discussion and future research directions

With this study we aim to contribute to the research on new venture legitimacy by exploring in-depth the legitimation process of new small high technology ventures that rapidly internationalised and struggled for survival during the dot.com bubble. Our study is

³ A risk decision making situation is similar to a rolling a traditional die, that is balanced and fair. In other words, it is possible to calculate the probability of the outcomes. Uncertain decision making situation resembles a rolling a die with infinite number of sides, without knowing whether the die is balanced and fair. Under these circumstances, it is impossible to calculate the probability of the outcomes. For example, Zimmerman and Zeltz (2002) refer in their paper to ‘the unknown future’ (p. 416) to define uncertainty. It looks like a tautology; however, what they probably refer to is an uncertain decision making situation.

positioned within the new venture legitimacy literature as it centres on entrepreneurial actions directed to acquire legitimacy for their newly established ventures during the early stages of industry emergence and quick decline. We explored how owners of five small software firms, selected from a homogeneous empirical context, went about acquiring legitimacy for their ventures in an attempt to internationalise and survive before and after the dot.com bubble.

Grounded in data, we advance a middle range theory of international new venture survivability that maintains that proximity to the hype reflects the degree of embeddedness of the firm within its environmental context. We view hype and uncertainty as two sides of the same coin. When signals about the market and technology are not reliable, or uncertain, entrepreneurs are prone to hype their business plans as there will be virtually no risk of such behaviour being detected. Under organisational pressures, when forecasts are critical in attracting funding, entrepreneurs have strong incentives to accentuate the positive and downplay the negative in laying out prospective outcomes, thus increasing the likelihood of failure. At the level of middle-range theorising, we infer that the closer the new venture is to the hype, the higher the likelihood of failure. As companies move away from hype towards risk decision making settings with more realism, more accurate information comes from the market. This makes it possible to perform much needed statistical calculations, and therefore to make a distinction between hype and reality.

The advancement of the middle range theory of international new venture survivability has several implications for the theory of new venture legitimacy. Our findings suggest that the new venture legitimisation process depends on the nature of the venture and of the environment it operates in. The data suggest that the key to understanding the process of legitimisation is the 'newness' of a venture and its respective market. In this we concur with Tornikoski and Newbert (2007) that the process of new venture emergence can be understood and predicted by viewing it as a quest for legitimacy. At the same time, the extent of newness allows differentiating between uncertain and risk decision making situations. For example, from the point of view of the creation of *new* economic activity (Kirzner, 1997), as a minimum, a new or established firm may introduce what internally is a new activity and what appears at the same time as a new imitator in a market (Davidsson, 2005). At the high end of the continuum of new economic activity creation, there might be the global introduction of radical innovation (Schumpeter, 1934). In this case we side with DiMaggio and Powell (1983) who

maintain that modelling on others' behaviour is a response to technical and market uncertainty.

From the legitimation strategies point of view, the middle range theory of international new venture survivability supports Zimmerman and Zeitz's (2002) assertion that manipulation may be employed strategically by new ventures to acquire legitimacy, and eventually reach a legitimacy threshold. At the same time, it suggests, in contrary to Zimmerman and Zeitz (2002) that this manipulation strategy is not that difficult for new ventures to pursue. As the data suggest, in an uncertain decision making situation entrepreneurs will prone to anchor (Lovallo and Kahneman, 2003) and subsequently hype their business plans to acquire for example venture capital. In the same vain, Rutherford et al. (2009) argue that entrepreneurs in the attempt to attain legitimacy threshold may tell '*legitimacy lies that are intentional misrepresentations of the facts*' (p. 950). As to the selection strategy, the data suggest that in VC backed firms, entrepreneurs might have no say over the selection of the environment in which their business shall operate. For example, entrepreneurs, driven by the intimate knowledge of the innovation, may want to grow gradually, whereas VCs, driven by the investment cycle of their investment portfolio, will insist on rapid internationalisation. As regards the creation strategy, it maybe assumed that it involves what DiMaggio and Powell (1983, p. 149) call 'managerial behaviour at the level of taken-for-granted behaviour' since the introduction of a new technology in an emerging market will imply a creation of new rules, regulations, and standards. Hence the following proposition:

P1: In an uncertain decision making situation, entrepreneurs will regard the manipulation strategy as the key strategic choice to acquire legitimacy.

P2. In an uncertain decision making situation, manipulation strategy will have the highest impact on the process of legitimation.

As to the type of legitimacy sought by the new ventures in an uncertain decision making situations, we side with Scott (1995) and DiMaggio and Powell (1983) that the acquisition of regulatory and normative legitimacy is a taken-for-granted assumption rather than a conscious strategic choice. Therefore we posit that:

P3. In an uncertain decision making situation, entrepreneurs will pursue the manipulation strategy to acquire cognitive legitimacy.

Our study also makes an attempt to understand the nature of a legitimacy threshold put forward by (Zimmerman and Zeitz, 2002). Although Zimmerman and Zeitz maintain that ‘what constitutes a threshold is difficult to identify and probably unique to each new venture’ (p. 428), they challenge researchers to delve into the nature of the legitimacy threshold by asking whether it is a continuous variable or a dichotomous phenomenon. The data in the study points to the continuous nature of the legitimacy threshold and suggest that it may be defined by the time when the emergent industry moves away from hype towards risk decision making settings, more *realism talk* or event *pessimism*. In this situation a new venture can no longer defend their status quo by pursuing the manipulation strategy as the history of a new market or an innovation is being formed, allowing for much needed statistical calculations to be performed. In this context, this legitimacy threshold could be viewed as a cutting point of the closure of the window of opportunity during which new ventures would be free to pursue the manipulation strategy without being detected. The following proposition then follows:

P4. The extent of the manipulation strategy will depend on the embeddedness of new venture in its hyped environment; closer to the hype, higher the extent of manipulation strategy.

The above proposition generates a legitimacy threshold paradox. According to Lovallo and Kahneman (2003), new ventures that anchor their business plans raise the odds of receiving necessary resources, but at the same time have the highest probability of failure. This would suggest that lesser the extent of the manipulation strategy increases the chances of survival. This may sound a plausible proposition, given the fact that entrepreneurs have an intimate knowledge about the potential of a technology and a market. However, as the data suggest, despite of the above knowledge, entrepreneurs in a hyped environment will be prone to follow the behaviour of others in the market.

By advancing the middle range theory of international new venture survivability, we also aim to encourage a dynamic scholarly conversation and research on legitimacy and survival of international new ventures. For example, one may consider testing the theory in the current settings of global financial and economic crisis. In this case, an area of interest might be to study the social collective behaviour under conditions of uncertainty and the impact of such

behaviour on entrepreneurship and small business, social marketing, public finance and public policy, and the society as a whole. In other words, can we use the middle range theory of international new venture survivability to reduce future impact of events like dot.com bubble and current housing bubble and financial crisis on the society? On one side of the equation there might be technical and market uncertainty related to the financial products, like sophisticated derivative instruments, developed over the years by bankers and the like, who themselves in turn were not able to understand them fully (www.parliament.co.uk). On the other, there might be identified constructs related to collective behaviour or group dynamics, derived from, but not limited to, sometime conflicting conjectures from wisdom of crowds (Surowiecki, 2004), butterfly economics (Ormerod, 1998), or shift to risk (Brown, 1965) behaviours.

In the above emergent theory of international new venture survivability, we side with Mathews and Zander (2007, p. 399), that the early growth and experiences of any firm becoming engaged in the global economy can best be accommodated in a theoretical framework that is open to an appreciation of internationalisation as a process of entrepreneurial discovery, strategising under genuine uncertainty rather than economising, and dynamic processes of exploitation, redeployment of resources and learning.

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Table 1. Summary of case companies

	Finance Software	Project Software	Tool Software	Mobile Software	Data Software
Business description	B2B platforms for financial service industry	Tools to estimate project costs	Tools to estimate and test smart cards	Platform to integrate mobile workforce data to the HQ	Data warehouse to convert data into information
Founded	1996 MBO	1992 Start-up	1985 Start-up	2000 Start-up	1998 Spin-out
Emergence of INVI¹	1998	1995	1993	2000	1998
Internationalized	1998	1997	1995	2000	1998
Country entered	US, Brazil	US, Europe	US, Europe	UK, Europe, Middle East	US
Entry mode	Exporting	Exporting	Exporting	Acquisitions	Sales subsidiaries
De-institutionalised²	1999 Focused on home market	2001 Ceased trading, re-internationalised	2000 Changed strategic direction	2002 Ceased trading	2001 Ceased trading

¹ INVI stands for international new venture idea; as shown in the table the emergence of INVI does not necessarily coincide with the emergence of the INV.

² Deinstitutionalisation is defined ‘...as the process by which the legitimacy of an established or institutionalized organizational practices erodes or discontinues’ (Oliver 1992, p. 564)

Table 2. Process of data collection and triangulation

Phase	Interviewees¹	Affiliation
Phase 1 Summer of 2000	Leader of internationalization team, Scottish Trade International	Internationalization team at Scottish Trade International was assisting small and medium companies in their internationalization efforts
	Leader of software team, Scottish Trade International	Software team at Scottish Trade International focused on coordinating the internationalization efforts of Scottish software firms
	Marketing Director of Finance-Software CEO of Project-Software	
Phase 2 Autumn of 2002	Marketing Director of Finance-Software Leader of software team, Scottish Trade International	
	Leader of internationalization team, Scottish Trade International	
Phase 3 Beginning of 2003	Business correspondent	This business correspondent was working for the 'Business a.m.' newspaper and was responsible for tracking the evolution of nineteen 'next generation' entrepreneurs who were involved in various high-technology start-ups. All these Cases were among those nineteen.
	Leader of software team, Scottish Trade International	
	Liquidator	This liquidator was appointed as a receiver to Project-Software
	CEO of Project-Software	
	Venture Capitalist	This venture capitalist invested in Project-Software and Data-Software; rejected funding to Tool-Software
	Marketing Director of Finance-Software CEO of Tool-Software CEO of Mobile-Software CEO of Finance-Software CEO of Data-Software	
	Board member of Scottish Enterprise	Scottish Enterprise is the Scotland's economic, enterprise, innovation and investment agency
Phase 4 End of 2003	CEO of Finance-Software CEO of Project-Software	
	Business strategy consultant	This business strategy consultant consulted Tool-Software
	Liquidator	
	CEO of Data-Software	

¹ Interviewees are listed in the order they were interviewed

Figure 1. Typology of hype

