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AFFORDABLE LOSS IN ENTREPRENEURIAL INTERNATIONALISATION – A FOCUS ON FINNISH BIOTECHNOLOGY FIRMS

Abstract

This paper develops the concept of affordable loss in the context of decision-making in entrepreneurial internationalisation and offers both an in-depth conceptual analysis and practical application in the biotechnology sector. Based on our findings, affordable loss seems to be connected to short-term, operative decisions, but is less applicable for long-term, strategic decisions. Furthermore, the use of the affordable loss principle appears to be more common in decisions involving a single decision-maker than in shared decision-making. However, we also challenge the premise of effectuation theory, as affordable loss and expected reward do not seem to present alternative elements when viewing decision-making in the context of entrepreneurial internationalisation. Instead, they are used in parallel, indicating that making a single decision may include the use of both causation and effectuation-based logic.

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1. INTRODUCTION

Despite the extensive amount of research on decision-making in the context of international business, some elementary themes have been almost neglected. In particular, criticism concerning the assumption of rational decision-making has been growing and there has been an explicit call for studies that place the decision-makers under exhaustive scrutiny (Aharoni et al., 2011). Furthermore, some key elements of the decision-making process have been ignored. Although earlier examples of international business research (e.g. Aharoni, 1966) highlight the importance of uncertainty as well as the cognitive constraints of the decision-maker, the number of studies that focus on these themes is surprisingly low.

This lack of interest is unexpected, particularly in the field of international entrepreneurship where processes typically involve the parallel execution of a variety of activities to exploit recognised opportunities (Mathews and Zander, 2007). This in turn generates a continuous flow of concurrent decisions. In international entrepreneurial firms, these decisions are made under the condition of genuine uncertainty and so entrepreneurs adopt different strategies to cope with it. Entrepreneurial judgement is a cognitive process that is influenced by the person, the place and access to relevant knowledge (Mainela et al., 2014). In the context of entrepreneurial internationalisation, uncertainty is embedded in the cultural, political, economic and institutional environment (Ellis, 2011), and is highlighted here because of less rational approaches to decision-making, such as hunches, intuition, and incomplete or biased information. It is possible that if the perceived opportunity is evaluated too high, the decision-maker will refrain from taking action (Shane and Venkataraman, 2000). Entrepreneurs may try to reduce any uncertainties by gathering information over the course of time or they may exploit opportunities immediately, thereby anticipating that the instant returns and first-mover advantages will cover the costs of uncertainty (Choi and Shepherd, 2004). In practice, international entrepreneurial firms need to constantly balance the acceptable level of uncertainty with the time frame in which the industry operates.

Decision-making under the condition of uncertainty is steered by a number of criteria that determine the chosen action. In the recent literature on effectuation, it is suggested that decision-makers would either choose an opportunity to maximise their expected returns or, alternatively, keep the decision related risks on acceptable level, thus resulting in affordable loss (Sarasvathy, 2001). Of these two options, our knowledge of the former is fairly extensive and the possibilities for calculating the expected returns are numerous. Regarding the latter, research has previously explored the concept of affordable loss from a mainly theoretical point of view (e.g. Read et al., 2009). Nevertheless, the empirical evidence is limited and so far it has failed to provide indicators that force decision-makers to follow affordable loss principles rather than focussing on mechanisms for returns on investment.

This study advances our understanding of affordable loss in entrepreneurial internationalisation with the help of a conceptual analysis and three illustrative case studies from the Finnish biotechnology industry. In particular, this study focuses on the decisions made when the companies were expanding their operations abroad. Three key findings, each making a distinct contribution to the previous research, were derived. First, the empirical evidence suggests that the principle of affordable loss is typically used for short-term, operative decisions. On the other hand, when a decision is more long-term and strategic in nature, affordable loss and risks are assessed but they are also compared with the expected rewards. In addition, contrary to what Sarasvathy (2001) suggests, our study showed that affordable loss and expected returns are used as complementary decision-making criteria since they can be applied simultaneously. Second, it seems that when only a single person is involved in the decision-making process, it is more likely that the decision-maker will base their decision on the affordable loss principle. Conversely, when the number of decision-makers increases, the decision-making process follows a more causation-based logic. Third, the concept of affordable loss seems to be closely related to the context. In rapidly developing industries, such as information technology, it is important to meet objectives in a timely fashion. However, due to the nature of the industry, entrepreneurial biotechnology companies appear to favour losing time over losing money.

This study looks at international entrepreneurship with a particular focus on the components of affordable loss principle, while also contributing to both the emerging theory of effectuation and adding to our understanding of entrepreneurial internationalisation. The prevailing assumptions are challenged and a critical view is taken, particularly on the applicability of previous research in the context of biotech firms.

2. AFFORDABLE LOSS IN DECISION-MAKING

For entrepreneurial firms, it is typical that two central concepts, namely the firm and the market, are not given: the firms are new, the markets are new, or both (Dew et al., 2008). In the case of biotechnology firms, the latter is often true and, thus, the decision-maker faces the dilemma of not being able to predict or control the development of either the market or the firm. Decision-makers in these firms have to make decisions based on the knowledge and capabilities at hand (e.g. Kalinic et al., 2014). One could argue that they are operating under Knightian uncertainty since human creative action produces a non-existent and hard-to-predict future (cf. Wiltbank et al., 2006). In the turbulent and global environment of biotechnology firms, the application of effectual logic becomes lucrative because it is non-predictive, i.e. it does not require clear goals, accurate predictions or an adaptive stance toward a largely exogenous environment (Dew et al., 2008). Furthermore, it has been argued that effectual logic is particularly suitable for environments with a high level of uncertainty (Sarasvathy, 2001), which is the case in the field of biotechnology.

Sarasvathy (2008), Dew et al. (2009a) and Sarasvathy et al. (2014) have all discussed the principles of effectual logic. These principles have been referred to as *bird-in-hand, affordable loss, crazy quilt, lemonade* and *pilot-in-the-plane*. The first, *bird-in-hand*, refers to the means-oriented approach. Entrepreneurs are likely to make their decisions based on the given means instead of first setting the goals. They tend to focus on the question 'What can I do?' instead of 'What should I do?' (Dew et al., 2009a; Sarasvathy et al., 2014). Second, *affordable loss* refers to the situation where entrepreneurs base their decisions on what they can lose (affordable loss) instead of focusing on the expected returns (Dew et al., 2009a). Affordable loss is easily calculated when the entrepreneur knows what s/he has and can estimate what the affordable loss is (Sarasvathy et al., 2014).

Third, when following effectual logic, entrepreneurs prefer to commit key stakeholders instead of completing detailed competitive analyses. This is referred to as *crazy quilt* (Sarasvathy et al., 2014). The fourth principle, *lemonade*, refers to leveraging unexpected environmental contingencies instead of exploiting pre-existing knowledge. As Sarasvathy et al. (2014) have stated, the process of 'turning lemons into lemonade' by embracing contingency plays out through the effectual process, which is based on the evolving means, goals and stakeholders of the venture. *Pilot-in-the-Plane*, the fifth principle, was added by Sarasvathy (2008). It is the *explicit rejection of inevitable trends* and refers to the logic itself (Sarasvathy et al., 2014).

From the viewpoint of this study, the interesting aspect of this classification is the suggestion that the decision-maker uses affordable loss as a decision-making criterion instead of expected returns (cf. Perry et al., 2011; Sarasvathy, 2001). Affordable loss as a concept refers to the *decision-maker's subjective perception of what s/he estimates to be able to put at risk and potentially lose as an outcome of the action* (Dew et al., 2009b). Particularly during the early phases of the venture, it is typical for the decision-maker to not have a clear view of the size of the market or the potential of the product, hence the expected returns are impossible to calculate using traditional means. Instead, s/he needs to judge the potential loss and make an explicit decision (Wiltbank et al., 2006). In order to make this decision, the decision-maker evaluates the resources at his/her disposal: who they are, what they know and who they know (Sarasvathy, 2001). Based on this preliminary information, s/he makes the decision.

Earlier research on effectual decision-making identified three main elements that, when combined, push the decision-makers to adopt effectual logic rather than causal logic and, in particular, the affordable loss principle versus the expected returns mechanism (Sarasvathy, 2008; Dew, Sarasvathy, et al., 2009). The first element is the *perception of uncertainty* (Sarasvathy, 2008). In conditions of high uncertainty, or when the entrepreneurs perceive a high level of uncertainty, they are not able to predict the future outcome or construct different scenarios and, therefore, cannot best identify the scenario with the highest returns and lowest risks. Therefore, the higher the perception of uncertainty, the more likely it is the entrepreneur will adopt the affordable loss principle.

The second element is the *desire for control* (Wiltbank et al., 2006). The entrepreneurs can choose how much they try to control the external environment. On the one hand, they can try to move fast and adapt to a rapidly changing environment in order to identify good opportunities. In this case, the emphasis on control is low. On the other hand, they can focus on the means of disposal; they can transform them, interact with potential stakeholders and create new and unexpected goals/opportunities. In this example, the emphasis on control is high, so the entrepreneurs do not try to estimate a potential for return in the future, but instead they downsize today's risk. Therefore, the higher the desire for control over resources, the more likely the entrepreneurs will adopt the affordable loss principle.

The third element is the *willingness to lose/invest* a certain amount (Dew et al., 2009b). Each entrepreneur estimates how much s/he or the firm is willing to invest and how much they can lose if the investment fails or does not reach its goals. In the ultimate analysis, if the decision-maker, i.e. the entrepreneur, is not willing to commit and invest a certain amount, there will be hardly any financial gain.

These three elements are all rather general and vague. It is not easy to understand what actually influences the decision-makers and how they decide to follow effectual logic rather than causal logic. In their conceptual paper, Dew et al. (2009b) went into more detail, although they were not very explicit in their discussion. Although they discussed the consequences and influences of affordable loss, they did not explicitly state what they meant by affordable loss. In this paper, we intend to build on their thoughts and, based on empirical evidence, examine the conditions under which an entrepreneur is more likely to adopt the affordable loss principle rather than the maximisation of returns theory. Additionally, we intend to shed light on the indicators that might encourage or discourage decision-makers in applying the affordable loss principle.

3. RESEARCH DESIGN

In order to increase our understanding of the applicability and usefulness of the affordable loss concept in international entrepreneurship, a qualitative case study approach was chosen. We pursued the principles of data collection established by Eisenhardt (1989) and Yin (1994), and used multiple sources of evidence when gathering our data (interviews and company documentation). A qualitative approach was considered appropriate because it describes life-worlds 'from the inside out' or, rather, from the point of view of the people who participate. By doing so, it seeks to contribute to a better understanding of social realities and to draw attention to processes, meaning patterns and structural features (Flick et al., 2004). On the other hand, case study as a research strategy allows for the inductive, in-depth investigation of the research topic, analysis of the phenomenon in its contextual setting, and a more holistic coverage of the companies selected (cf. Ghauri, 2004). In order to minimise the effects of environmental and situational factors, we limited the number of cases to three Finnish biotechnology companies.

The choice of context is imperative, as the appropriateness of the internationalisation strategies depends on the industrial context in which the companies operate (Andersson, 2004). It can also be asserted that the decision-making logic of international entrepreneurial firms may be different across industries. The biotechnology industry is a science-led industry that can be described as entrepreneurial, knowledge-intensive and rapidly changing (Hine and Kapeleris, 2006; Brännback et al., 2007). Although there seems to be agreement as to what biotechnology is – the application of science and technology with living organisms, as well as parts, products and models thereof, to alter living or non-living materials for the production of knowledge, goods and services (OECD, 2014) – included in that definition are numerous heterogeneous subfields, such as healthcare biotechnology, agricultural biotechnology and industrial biotechnology (EuropaBio, 2015).

The present study is limited to healthcare biotechnology (also known as red biotechnology or life sciences), and the biotechnology industry refers to organisations conducting research and development (R&D) activities in order to develop healthcare-related products or technologies. This focus was chosen for several reasons. First, it is economically significant due to the applications used in product development in the pharmaceutical industry (Brännback et al., 2001; Pisano, 2006). Second, it has high growth potential due to the development of medical research (Burns, 2005). Third, the product-development processes are long and expensive: biotechnology applications are expected to generate cost savings in the long run by shortening and improving these processes and thereby reducing risks or making time-consuming diagnostic methods more efficient (Hermans et al., 2005; Bains, 2006). This long product development process has made the industry very capital-intensive and highly-regulated, which means that capital needs to be raised continuously (Hine and Kapeleris, 2006). When looking at decision-making criteria, these characteristics are very interesting from the perspective of this study as the theories of expected return and affordable loss might be relevant here.

Healthcare biotechnology as an industry is characterised by two phenomena: convergence and consolidation. It is converging in order to create new, innovative healthcare solutions, and so the division between the core technologies (drugs, diagnostics and devices) is becoming blurred (Eselius et al., 2008). This requires a global business approach as the best partners and providers are located around the world. Second, a wave of consolidation has polarised the industry. On the one hand, the so-called Big Pharma (the largest pharmaceutical companies) dominate the market, yet their future success is increasingly dependent on collaboration with small, innovative biotechnology companies (Weintraub, 2008). Therefore, it is not surprising that in recent years we have witnessed the rise of international entrepreneurial biotechnology firms in all industrialised economies.

In order to shed light on the concept of affordable loss, we studied the decision-making of three new Finnish ventures in the biotech industry. The selection of cases is a crucial decision in the research process and theoretical sampling is recommended (Eisenhardt and Graebner, 2007). This involves choosing cases that are likely to replicate or extend the emergent theory (Eisenhardt, 1989). The theoretical qualifications of the case also have to be kept in mind, in other words, how well they comply with the conceptual categories and the extent of their explanatory power (Eisenhardt, 1989; Smith, 1991). Besides being Finnish biotechnology firms, the companies in this case study all share the following characteristics: they are small and medium-sized (SMEs), they operate in healthcare life sciences, they have a commercialised product and they are international. Key information regarding the case companies is summarised in Table 1.

Table 1: Key characteristics of the case companies

	Turnover (Euro)	Employees (5/2012)	Founded	Share of Exports	Start of Exports
A	131,000	10	2004	90%	2011
B	356,000	10	2009	75%	2009
C	879,000	10	2007	85%	2007

The cases can be described as instrumental (Stake 1995) since they illustrate the phenomenon under study in real-life contexts. The empirical data for the study was collected in 2012 and the main source of data was face-to-face interviews with the case companies' management. The case companies chosen fulfilled the pre-set requirements and the persons interviewed were the key individuals behind each company's decision making. In two of the companies, the interviewees were CEOs or managing directors. In the third company, the key decision-maker, the managing director, was on parental leave and, therefore, three people (deputy managing director, production manager, and head of marketing) were interviewed. We considered these people to be key sources of information because the international growth of their company reflects company strategy, which is based on their decisions. The persons involved in the process were willing to discuss their experiences, but in order to preserve the anonymity of the interviewees, the case companies were disguised.

In order to follow the decision-making logic of the interviewees, we adopted a semi-structured process that facilitated the free expression of the entrepreneur's ideas. This kind of 'think-aloud' method has been used in earlier studies of entrepreneurial effectuation

(Sarasvathy et al., 1998). On the other hand, the themes studied in each interview allowed us to compare responses across subsequent interviews and secure for data equivalence during the data collection. Collecting data through interviews and observations is considered appropriate in the context of effectuation (Perry et al., 2011). The interviews were conducted by two or three individuals, thereby increasing our confidence in the reliability of interpretation. The interview questions dealt with several topics, such as the internationalisation of the company, the decision-making process and the evolution of the company. With the consent of the interviewees, the discussions were recorded and transcribed verbatim. All the interviews were conducted in English, although some of the interviewees added a few words and comments in Finnish during the interviews.

The data obtained was further analysed in several phases (cf. Yin, 2009). First, the interview recordings were transcribed and a within-case analysis of each company was conducted (Eisenhardt, 1989). Consequently, the information obtained from the interviews was reorganised to form descriptive narratives, which helped us to identify the key events and the background of each case. We then augmented the interview data with some additional information available from databases, company websites and other secondary sources. The internationalisation of each case company was described using the critical-incident technique (cf. Butterfield et al., 2005) in terms of its internationalisation activities and evaluated from the viewpoint of affordable loss. Finally, we included a cross-case comparison in order to reveal the similarities and differences between the companies.

4. ANALYSING AFFORDABLE LOSS

Our analysis began with the aim of understanding the decision-making logic of the case companies, particularly when making decisions regarding internationalisation and market expansion. In other words, we were interested in whether the entrepreneurs/key decision-makers framed their decisions using either causal or effectual thinking. In line with Perry et al. (2011) and Sarasvathy (2001), this classification was conducted according to the following dimensions: goal-setting vs. given means as the driver for decision-making; expected returns vs. affordable loss as a decision-making criterion; decisions based on environmental analysis vs. strategic alliances and prior commitments; exploitation of existing knowledge vs. leveraging opportunities; and predicting vs. controlling the future.

All in all, the decision-making in the case companies was very entrepreneurial in nature. In fact, the interviewees often compared their decision-making with that of large multinationals and pointed out that in entrepreneurial firms like theirs, decision-making is often flexible and less bureaucratic:

> *I worked twelve years for big companies and I have to say that this is so much more fun. You are not leading like quarter to quarter to quarter to quarter, you are not spending your time filling totally meaningless papers. The amount of bureaucracy is so much lower. (Company C)*

> *Well, I've understood that when the headcount goes from 20 to 40 there are significant changes. [...] There has to be more structured communication, more official meetings, so less talking in the corridor. You then have five that you have to report to and they again have five and so on, so you don't engage with the people so much. (Company B)*

The decision-making processes of these entrepreneurial firms were also experienced as being faster and shorter than those of multinationals, as the following quotes demonstrate:

And when the size of the organisation grows you have to have, make some defined decision-making routes, and they bring a certain kind of ... inflexibility. Time consuming things. You lose the agility and flexibility. [...] everything has to be done in meetings or boards or whatever. We can make decisions just by shouting to the next room here. (Company A)

The difference between a small start-up and a multinational company is in the structure and decision-making processes. It's a lot quicker and you can move quicker when you're a small company. (Company B)

The interviewees also emphasised that even if, from the company's perspective, it is all about balancing the investment, the viewpoint of the board may be different. In particular, the representatives of the venture capitalist often emphasise the expected returns and pay less attention to the short term losses.

It is a balance between expected returns by the venture capitalist and the losses the company can afford – but all needs to be earned back. (Company A)

Next, in order to dig deeper into the construct, we continued by analysing it according to the dimensions of affordable loss (Dew et al., 2009b): acceptable risk, predetermined level of affordable loss, available internal means, amount of information needed for making a decision, and which resources are considered 'losable' or 'patient'. In order to provide a contextualised explanation of the concept, we also investigated the context when the affordable loss principle was used (i.e. for what kind of decisions, in what kind of situations, when and by whom). The key findings are discussed in the following section.

5. AFFORDABLE LOSS – WHEN, WHAT AND HOW?

The interviews indicated that the affordable loss principle was typically used when making *'smaller' decisions* that involved a *limited window of opportunity* and required a fast decision. These decisions were often related to the daily operations of the company, independently of the task or function that they were related to. The use of the affordable loss principle was spread throughout the company to all of its functions, such as marketing, purchasing, pricing, R&D and order processing. Commonly, as illustrated by the following quote, these decisions were made by a single decision-maker such as the managing director, CEO or marketing manager:

> *Basically, regarding pricing, I have the freedom to make decisions. Of course, we discuss it, different options, with the top management team. (Company C)*

In the case of more significant decisions that have a long-term impact, the decision-making was the responsibility of the whole management team and/or the board. In the latter case, the affordable loss principle was no longer applied in the decision-making, or at least not as the main or only criterion. On the contrary, external information was searched for, sometimes even extensively, and that information was utilised in decision-making in order to assess the related risks, investment required and *expected rewards.* This kind of decision-making was considered to be more 'safe', but also time consuming and, therefore, it could only be applied to the most important decisions.

> *As a group, you can make a better risk-assessment and it's more certain …*
> *[If there are many people involved in the decision-making process] you will need more information or more data and also it will take more time. (Company C)*

When more people are involved in the decision-making process, they need some common basis on which to build their decisions. This basis can be data from, for example, market surveys or competitor analysis, as the following quotation demonstrates:

> *[..] when we changed the direction [of the company], we went through a number of market reports, publications, all kind of news, everything, we just tried to collect as much information as we could. (Company A)*

The expected rewards were never used as the sole decision-making criterion, but they were always assessed in relative terms compared with affordable loss or acceptable risk. The evaluation of risk varied across interviewees, but two main types of risk were identified: risk of losing time and risk of losing money.

Risk of losing time referred to delays in operations and delivery or loss of the interviewee's personal efforts. These were considered as something the company could afford to lose and so no financial value was calculated for them. This might be due to the nature of the business; for these companies, it is not about being the fastest to market but more about having the best product.

> *The only thing I'm investing in is plane tickets and then time. So what I stand lose is perhaps one year in business if they are not performing because then we terminate the agreement and find another partner. So that's the largest risk: a delay in launching or implementing business in a certain country. (Company B)*

In the biotechnology industry, it is typical that the product development process takes years. Therefore, the speed of operations is also considerably slower than it is in many other fields and so companies do not purposefully target being the first ones in the market.

> *I will never be the first in the market, it is a very established market. ... We are playing in the niche; we have a niche strategy within the market. (Company B)*

In the biotechnology industry, it is also typical that market development and value creation are blurred and the estimation of future market development is very difficult to make. Therefore, it is not surprising that most of the interviewees preferred to estimate risk in terms of time instead of money. However, one informant from Company A was able to evaluate the affordable loss in financial terms:

> *[...] say, a very rough number is 100,000 Euros or something like that. So, it's not the world's biggest sum of money if you start to develop a test, go a little bit and stop it there. Maybe you have burned something like 10, 20, 30,000 Euros. So it's not really a big thing to stop such a project. (Company A)*

Interestingly, the interviewees also stressed the fact that their personal investment in the business was often limited. As is usual in the biotechnology industry, the first years of business are seldom profitable. The business operations are run with venture capital and the financial risk is divided among the entrepreneur, business angels and investors. Additionally, some business models involve very little financial risk for the company, as they involve building a long-term relationship and getting the other party (partner) committed. This is demonstrated in the following quotations:

But to be able to estimate the risks… The risk I think is best to limit […] but it's something that you have to little bit jump in to cold water and see how it goes.[…] Well, the thing is, I don't have to invest [a lot] when I start with a partnership because it starts with them purchasing products from me. (Company B)

I don't know if we are looking for fast income… At least I'm not thinking that way. We're looking for long-term relationships and we maybe have to start by putting in a little bit of money, giving some samples and so on, you know, starting slowly. (Company C)

Besides the concept of risk or loss, whether it was affordable or acceptable also seemed to vary. Interestingly, the interviewees with considerable previous experience considered many issues to be acceptable just because they thought it was 'the name of the game'. In other words, it was an essential feature of the business and so out of their control.

We wouldn't have the company in place, basically. We would have run out of money, before we … would have been in a situation where we have some initial sales. Because it's, this is, running a company like this, it's kind of a, game of, funding at the same time. (Company A)

On the other hand, the less experienced interviewees reported spending considerable time discussing the issues with other team members and decision-makers in order to determine an acceptable level of risk.

And usually, when we make decisions, we really think about the risks and we are thinking "Are we going to take this risk?" If we take it, then we took it. ... Yeah, like basically our current cash flow doesn't allow us to take any huge risks. (Company C)

Our findings therefore challenge some earlier thoughts on affordable loss. For example, instead of treating the different types of risk as alternatives or opposites, time versus money (Dew et al. 2009), our informants seemed to consider the two as complementary methods of mental accounting.[i] In addition, we were able to identify decisions where affordable loss and expected return logic did not just complement each other, but were actually used simultaneously. Finally, it seems that the level of experience and learning of the decision-maker has an impact on the interpretation of affordable loss. All this indicates that using a standardised tool, such as quantitative scales, for assessing affordable loss and the related decision-making may not provide an accurate picture of the concept.

6. CONCLUSIONS

In the present paper, we analysed decision-making regarding the internationalisation process of three Finish international ventures and achieved a deeper knowledge about affordable loss in the context of entrepreneurial internationalisation. We found that the nature of the decision and the number of decision-makers both seem to affect whether the affordable loss principle is used in decision-making. When a single person is making the operational decisions, the affordable loss principle is often used. However, when the number of individuals making the decision increases and, for example, the board becomes involved, the decision-making process becomes slower, longer and leans more towards additional information and calculations of expected returns. Hence, the gut feeling and previous experience of one particular individual are no longer important.

Affordable loss was conceptualised as loss of time, loss of financial resources and loss of independence. Entrepreneurial firms seem to consider time and the efforts of personnel to be losable resources, which do not endanger the company. Accordingly, they were not included in calculations of any financial value. Considering time as an affordable loss can be seen as very much a context-related issue; companies in the biotechnology industry are used to long product development and patent processes and so for them it is not always crucial to be the first and fastest to the market. As the temporal context is so decisive when studying affordable loss, we may assume that the findings might be different if we were to study an industry with a faster pace of operations.

Estimating affordable loss in terms of finance was very demanding since all financial loss is taken extremely seriously in small companies with limited resources. Decision-makers following the affordable loss principle were also worried about the loss of independence. The managers of these entrepreneurial companies were not only worried about their personal loss of control but also about the risk of being acquired or merged with some other company due to being too dependent on the investors' money. Hence, the level of affordable loss is also evaluated on the basis of 'how much investment we need and how much external funding we should accept.' Additionally, the findings point out that a contextualised interpretation of the concept is recommended when studying the phenomenon.

The previous literature has suggested that, in the early phases of the venture, the decision-makers do not have a clear image of the market or the expected returns, and this drives the decision-makers to consider the affordable loss. The case companies' decision-makers considered both the affordable loss and expected returns when making their decisions. These two issues were present as complementary aspects of decision-making, although they were also considered simultaneously. This might be because the case companies studied here were not pure new ventures, but were more accurately in the transition phase from being a 'new' to a more established ventures.

7. IMPLICATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

One important implication for entrepreneurs and management teams consists of showing that the type of decision-making adopted depends on the size of the company. In smaller and more dynamic companies, it is possible to make rapid decisions and so the decisions can be taken by one or few people. In this case, the amount of necessary information on which the decision is based is lower and decision-makers can adopt the affordable loss principle. Affordable loss is often quantified in terms of time, individual efforts and money. Small companies can afford to lose plenty of time, but only a very limited amount of financial resources. However, it is important for decision-makers to recognise that in rapidly changing industries time should also be considered as a valuable resource, and losing it might ultimately lead to losses in financial terms.

The findings of this study propose several avenues for future research. For example, it might be interesting to expand on the earlier works regarding the composition of top management teams in international entrepreneurial firms. After all, prior research does indicate that the mind-set of the entrepreneur (Nummela et al., 2004) and the characteristics of the top management team (Reuber and Fischer, 1997; Reuber and Fischer, 2002) both affect the firm's internationalisation. Furthermore, the need to augment the management teams of these firms has also been recognised (Loane et al., 2007). If this is the case, it raises the question of what kind of team composition would be optimal in international entrepreneurial firms from the viewpoint of decision-making. Should the team include members who work according to similar logic or would it be better to have people working with both the affordable loss principle and expected returns mechanisms? Future research projects might shed light on these intriguing questions.

The present study is a qualitative study and as such it produces context-specific knowledge that can be applied to different contexts only with caution. Future research will hopefully extend this investigation to different sectors and countries. Moreover, we focused on fairly new international ventures. Although this is category of firms has received considerable attention over the last few years, most of the SMEs are not international since inception and they have followed different internationalisation pathways. Therefore, it is also important to understand how such companies make their decisions during their entrepreneurial internationalisation. Finally, this is a longitudinal retrospective study. This type of study suffers from the interviewees' capability to correctly recall events that happened previously, sometimes more than ten years before. We therefore suggest performing real-time longitudinal studies by, for example, observing the internationalisation process at various points of time by revisiting the company from time to time and by personally pointing out the differences.

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[i] *Mental accounting is a set of cognitive operations used by individuals and households to organize, evaluate and keep track of financial activities* (Thaler, 1999).