Decision-makers’ risk perception in the internationalisation of small and medium-sized firms

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Abstract
Managers’ perception of risk in internationalisation has been found to influence the internationalisation behaviour of small and medium-sized firms (SMEs), acting as a barrier hindering SMEs to initiate, develop or sustain exporting or direct investment operations in foreign markets. Understanding decision-makers’ risk perceptions is therefore a prerequisite for understanding SME internationalization. In this study, we seek to provide insights into the ways in which SME decision-makers perceive risks in foreign markets. A qualitative interview-based approach was adopted by collecting data from thirty two Danish SMEs operating in four different industries. Findings suggest that while risk awareness exists, internationalisation is not perceived as risky behaviour by the decision-makers. Findings also highlight the importance of decision-makers’ background, including cognitive and psychological characteristics, such as self-efficacy and locus of control, and their experiences in explaining risk perceptions.

*Key words:* risk perception, internationalisation, small and medium-sized firms, self-efficacy, locus of control, experience.
Small and medium-sized enterprises (SMEs) are increasingly facing a dilemma: on the one hand, internationalisation provides SMEs with an opportunity for growth, while on the other hand, internationalisation exposes SMEs to heightened risks, which may negatively influence the performance and well-being of the firm (Bekaert, Harvey, Lundblad, & Siegel, 2014; Luo, 2009; Prashantham & Floyd, 2012). This is particularly true for SMEs that face higher risk because of their size (Lu & Beamish, 2001). Due to resource scarcity, SMEs have a limited ability to withstand potentially negative outcomes, which is why the level of risk is usually higher in small firms (Mitchell, 1995). Thus, instead of providing advantages, internationalisation may have very negative effects on survival and growth for SMEs (Fernhaber & Li, 2013; Mudambi & Zahra, 2007; Puig, González-Loureiro, & Ghauri, 2014; Sapienza, Autio, George, & Zahra, 2006). Consequently, recognising and pursuing opportunities across national borders has been categorised as risk-seeking behaviour (McDougall & Oviatt, 2000). In an effort to explain SME internationalisation better, the concepts of risk and decision-makers’ perception of risk have attracted the attention of scholars in academic inquiry. This is partly explained by the differences in decision-making processes between larger firms and SMEs. Whereas in larger firms, decision-making is typically rational and strategic goal-driven, decision-making in SMEs is often intuitive, with decision-making power often conferred to a single individual (Brouthers, Andriessen, & Nicolaes, 1998; Child & Hsieh, 2014; Jansen, Curseu, Vermeulen, Geurts, & Gibcus, 2011). Thus, in SMEs, strategic decisions, including those on internationalisation, are more likely to be the outcome of a single individual decision-maker and their perceptions (Child & Hsieh, 2014; Lamb, Sandberg, & Liesch, 2011).

Risk perceptions, that is, decision-makers’ subjective ‘assessment of risk inherent in a situation’ (Sitkin & Pablo, 1992, p. 12), have been used to explain the likelihood and willingness of
SMEs to internationalise (Cavusgil & Naor, 1987), the timing of internationalisation (Acedo & Jones, 2007; Oviatt & McDougall, 2005), the operation modes used when entering and operating in foreign markets (Ahmed, Mohamad, Tan, & Johnson, 2002; Demirbag, McGuinness, & Altay, 2010; Schwens, Eiche, & Kabst, 2011) and the number of countries in which the firm is actively involved (Kiss, Williams, & Houghton, 2013). These studies support the argument that managerial risk perceptions influence SMEs’ involvement in foreign markets and emphasise the centrality of risk and managerial risk perception in explaining and understanding the internationalisation behaviour of SMEs. Understanding how decision-makers perceive and judge the risks of internationalisation, including the factors that drive and shape decision-makers’ perceptions of risk, is therefore a pivotal task in research on SME internationalisation (Acedo & Florin, 2006). Understanding how and why decision-makers perceive the risk of internationalisation the way they do can lead to a better understanding of internationalisation decision-making and internationalisation behaviour, including why some SMEs, and not others, recognise and capture opportunities across national borders.

Despite the centrality of risk in the internationalisation literature, there has been surprisingly little research into *how decision-makers perceive risk* in the internationalisation process (Acedo & Jones, 2007; Liesch, Welch, & Buckley, 2011). In order to address this gap in the literature and enhance the understanding of risk in the study of SME internationalisation, the purpose of this paper is to empirically examine how SME decision-makers view, experience and judge risk in the internationalisation process, including the different factors influencing and shaping decision-makers’ risk perception. This study makes an important contribution to existing literature on SME internationalisation by building on the cognitive perspective on the internationalisation of SMEs. First, this study focuses on the micro-foundations, as they relate to decisions associated with firm internationalisation. Second, it enriches existing literature on the internationalisation of SMEs by
identifying a number of factors that appear to increase or decrease managers’ assessment of risk.

The remainder of the paper is structured as follows: First, we begin by defining risk and establishing the significance of risk in SME internationalisation, including factors influencing decision-makers’ perception of risk. Second, we describe the methodology of our study. Finally, we present and discuss the findings that lead to our conclusions and their implications.

Theoretical Background

The following section presents the theoretical background of the study. To start with, we discuss various approaches to defining and conceptualising risk. This is followed by a summary of existing theoretical approaches in research on risk perception. Finally, the key findings of internationalisation research on decision-makers’ perception of the risk associated with internationalisation are critically discussed.

Risk and risk perception

Risk is often mentioned as being central to theorising about and explaining the internationalisation of firms, including SMEs (Acedo & Florin, 2006; Figueira-de-Lemos, Johanson, & Vahlne, 2011; Liesch et al., 2011). For instance, previous studies show how decision-makers’ risk perceptions, that is, their subjective assessments of the level and magnitude of risks associated with international activities, are an important antecedent of internationalisation propensity (Cavusgil & Naor, 1987; Simpson & Kujawa, 1974), speed of internationalisation (Acedo & Jones, 2007), and the degree of internationalisation (Acedo & Florin, 2006; Kiss et al., 2013). Thus, differences in the scope, speed, and extent of internationalisation are likely to be the result of individual differences in how risk is perceived by the decision-maker (Liesch et al., 2011).
Risk is a difficult concept to define as it has multiple meanings depending on the context in which it is being applied (Lumpkin & Dess, 1996). Janney and Dess (2006), for example, identified three different conceptions of risk: risk as variance, risk as downside loss, and risk as opportunity costs. Risk is only a factor in managerial decision-making because decision-makers cannot gain sufficient knowledge to predict the actual outcomes of their decisions (Renn, 1998). Thus, risk is associated with the possibility that an unexpected outcome may occur as a result of human actions. Whether risk refers to all unexpected outcomes, including positive or only negative ones, has been a point of discussion. While the classic conception of risk refers to all unexpected outcomes, managers seem to perceive risk in ways that conflict with this perspective on risk (March & Shapira, 1987). Some authors argue that managers perceive risk not in terms of variance, but rather as downside loss, that is, the risk of the actual return being below the expected return (March & Shapira, 1987). This suggests that risk is about both likelihood and magnitude (Mullins & Forlani, 2005). Thus, Janney and Dess (2006) argue that the most appropriate definition of risk, from a managerial perspective, is ‘the likelihood and magnitude of downside loss, or hazards, as opposed to an overall variance of returns’.

In the literature on internationalisation and international entrepreneurship, risk and uncertainty are often treated as synonyms, which may in turn constrain our understanding of internationalisation (Liesch et al., 2011). Others argue that risk and uncertainty are two sides of the same coin, meaning that they are two conceptually different concepts, yet they are closely related. For instance, Aven and Renn (Aven & Renn, 2009) define risk as an event where the outcome is uncertain, making uncertainty an antecedent of risk. Knight (1921) clearly distinguishes between risk and uncertainty. According to Knight (1921) risk refers to situations where decision makers are knowledgeable about potential outcomes and the probabilities of these outcomes occurring. By contrast, uncertainty refers to situations where decision makers lack insight into potential outcomes.
and their probabilities. Hence, risk and uncertainty are conceptually different in that risk implies that the probabilities of future outcomes are known, whereas uncertainty implies they are unknown (Alvarez & Barney, 2005; McKelvie, Haynie, & Gustavsson, 2011). Knight (1921) distinguishes between three different kinds of probability situations: (1) ‘a priori probability’, determined by mathematical computation for a known set of possible states, (2) ‘statistical probability’, based on classification of possible states and empirical data indicating their frequencies, and (3) ‘estimates’, where there is no basis for classifying states and, thus, no way to evaluate empirically their relative frequencies. While Knight (1921) and his distinction between risk and uncertainty are heavily cited and used, others argue that this distinction is not appropriate in strategic management research. For instance, Miller (2007, p. 67) argues: ‘Using ‘uncertainty’ to refer to unpredictable contingencies affecting performance and ‘risk’ to indicate unpredictability or possible downside variability of performance more accurately describes the meanings expressed in entrepreneurship and strategic management research than do Knight’s (1921) classic definitions’.

In the context of internationalisation, risk arguably refers to ‘the dangers firms face in terms of limitations, restrictions, or even losses when engaging in international business’ (Ahmed et al., 2002). There have been a few attempts in the literature to develop an integrative framework for understanding and managing risk in firms operating across borders. For instance, Miller (1992) developed a framework for categorising the uncertainties faced by firms operating in foreign markets, classifying the risk factors as environmental uncertainties, industry risks and firm-specific risks (Miller, 1992). General environmental factors include political uncertainties, government policy uncertainties, macroeconomic uncertainties such as interest rates and foreign exchange variability, social and natural uncertainties. The industry-related uncertainties comprise elements that are specific to the industry and include input-market uncertainties, product-market uncertainties and competitive uncertainties resulting from the actions of competitors and product and process
innovations. The firm-specific component includes operating uncertainties like production, labour and input supply issues, uncertainties about potential liabilities resulting from products and emissions of pollutants, uncertainties relating to research and development, credit uncertainties and behavioural uncertainties. However, it is not clear which of these would or may be associated with risk.

**Cognition and risk perception**

Several areas of the literature and academic disciplines provide insights into the factors influencing individuals’ risk perception. The inter-subjective nature of risk perceptions calls for inquiry into risk-related interpretive schemes (Bromiley, McShane, Nair, & Rustambekov, 2015; Miller, 2009). Perception is a conceptually broad term referring to ‘… a process in which the perceiver constructs reality by performing cognitive operations on cues derived from the environment’ (Kiesler & Sproull, 1982, p. 552). This suggests that perception is a cognitive activity that refers to how managers interpret and make sense of the information received by one or more of their senses. Thus, in order to make sense of the environment, managers rely on their perceptions to understand the vast amount of information or stimuli that they are exposed to.

The goal of research on risk perception is to provide a clearer understanding of the ways in which individuals form judgements about the risks they face (Wilkinson, 2001). Within social science, risk perception has often been studied by adopting a cognitive perspective (Taylor-Gooby & Zinn, 2006b). The cognitive/learning perspective assumes that individuals are bounded rational and is largely influenced by cognitive psychology, which focuses on the processes by which individuals think and make decisions. According to this perspective, perceptions of risk are conditioned and influenced by individual cognitive biases. To cope with constraints in cognitive capacity, individuals employ simplifying strategies and cognitive heuristics, that is, ‘cognitive shortcuts that emerge when information, time, and processing capacity are limited’ (Bingham &
Eisenhardt, 2011, p. 1439). In general, heuristics are quite useful and may potentially result in more accurate judgements with less effort (Mousavi & Gigerenzer, 2014). However, heuristics may also result in cognitive biases, which cause decision makers to either overestimate or underestimate risk (Barnes, 1984; Kiss et al., 2013). Tversky and Kahneman (1974) show how individuals rely on a number of judgemental heuristics when faced with uncertainty. These include availability bias (the tendency to overestimate the significance of rare but striking factors), immediacy of effect (results that directly follow causes tend to receive greater attention in thinking about risk than more remote ones), and loss aversion (the damage of a loss tends to be weighted more highly than the benefit of an exactly equivalent gain) (Taylor-Gooby & Zinn, 2006b). Thus, according to the cognitive/learning perspective, differences in perceptions of risk, either between individuals or between groups of individuals, is considered a matter of cognition (Sjöberg, 2000).

Given the centrality of managerial risk perception in explaining heterogeneity in firm internationalisation, several studies have made an attempt to identify antecedents explaining decision-maker’s perception of risk associated with internationalisation. In general, these studies successfully identify a number of psychological and situational characteristics which together influence and determine managerial risk perceptions. In the context of SMEs, where decision-making is often centralised around a single decision-maker, the managerial mindset, including psychological traits and the cultural-cognitive embeddedness, is likely to influence how decision-makers perceive the risks of internationalisation (Oviatt, Shrader, & Mcdougall, 2004). This is consistent with the Upper Echelon Perspective in strategic management literature, according to which the decision makers’ interpretation of the environment is largely determined by the decision makers’ interwoven set of psychological and observable characteristics (Cannella, Finkelstein, & Hambrick, 2010; Hambrick & Mason, 1984; Hambrick, 2007). Previous studies have examined the extent to which the decision makers’ managerial mindset and cognitive characteristics influence
their subjective assessment of risk. For instance, it has been suggested that the cognitive style of the individual decision maker influences his or her perceptions and ultimately the decision-making process (Wiersma & Bantel, 1992). Cognitive style refers to how decision makers think, that is, how they gather and processes information (Cannella et al., 2010). Sadler-Smith (2004) distinguishes between rationality and intuition as two contrasting cognitive styles that reflect distinctive ways of processing information. Acedo & Florin (2007) find that decision makers with a rational cognitive style will perceive higher levels of risk in pursuing international opportunities. Thus, decision makers will perceive more risk when they gather and process information in a rational and logical way. In addition, the international orientation of the decision makers, that is, their mental attitude regarding foreign expansion, is suggested as one of the significant determinants of perceived risk (Acedo & Florin, 2006; Eroglu, 1992). High international orientation appears to foster lower perceptions of risk in internationalisation. Consequently, decision makers with an international orientation are more likely to proactively identify, create and capture international opportunities (Acedo & Jones, 2007; Knight & Kim, 2008). Others mention the decision makers’ tolerance for ambiguity, that is, the extent to which an individual is able to make decisions in uncertain and risky situations, as an important determinant of perceived risk. Decision makers are more likely to associate international activities with less risk when exhibiting a higher tolerance for ambiguity (Acedo & Jones, 2007). Together, these findings suggest that the decision makers’ cognitive traits influence their subjective assessment of risk associated with international activities. Kiss, Williams and Houghton (2013) have also made an attempt to identify the factors influencing risk perception of key decision makers. More specifically, these authors suggest that the risk perceptions of key decision-makers are influenced by their motives for internationalisation. Proactive decision-makers perceive internationalisation opportunities as less risky, while reactive decision-makers perceive internationalisation opportunities as more risky (Kiss et al., 2013).
In addition to the individual characteristics, previous studies have successfully identified a number of organisational characteristics that influence decision makers’ assessments of risk in internationalisation. For instance, Acedo and Florin (2006) suggest that the firm profile, that is, its age, size and scope of national operations, act as a reference point and influence decision makers’ perceived risk from international expansion. Larger firms are less vulnerable to potential negative outcomes when internationalising because they have more resources and therefore a higher capacity to absorb failure (Claver, Rienda, & Quer, 2008; Eroglu, 1992). Thus, decision makers in older, larger and more established firms are likely to perceive lower levels of risk associated with internationalisation relative to decision-makers in new ventures. Furthermore, it has been found that risk is perceived to be higher in the later stages of internationalisation, when more resources are committed to increase the level of internationalisation (Claver et al., 2008; Liesch et al., 2011). Others have argued that ownership may play a central role in explaining risk perceptions, arguing that the perception of risk is higher in family businesses relative to SMEs with different ownership structures (Claver et al., 2008). Similarly, family involvement in management has been identified as a factor leading toward caution in the internationalisation process (Bell, Crick, & Young, 2004; Kontinen & Ojala, 2012). Hence, the internationalisation of family businesses is typically described as cautious and slow, in order to avoid unnecessary risk (George, Wiklund, & Zahra, 2005).

**Methodology**

A qualitative approach was adopted in order to examine and understand the way managers perceive risks associated with internationalisation and the meanings they attach to these risks. A qualitative approach was deemed appropriate for this study given its strengths in understanding something from the subjects’ own perspective and to elicit their perceptions (Das, 1983; Silverman, 2013). Adopting a qualitative approach could therefore help advance our understanding of SME
decision makers’ perceptions of the risks associated with doing business in foreign markets (Bromiley et al., 2015) and the different types of factors that are somehow related to decision makers’ experience of risk and the cognitive processes related to risk perception (Hawkes & Rowe, 2008).

As the study included a limited number of participants, these were selected for analytical rather than statistical reasons (Eisenhardt, 1989; Flyvbjerg, 2006). In other words, participants were selected because they were considered particularly suitable for examining risk perceptions associated with internationalisation (Eisenhardt & Graebner, 2007). Participants were selected by using ‘criterion sampling’ (Patton, 2002), where cases had to meet a set of predetermined criteria to be considered eligible for this study. First, the firm must be categorised as an SME. For the purpose of this study, we defined SMEs according to the official definition of the European Commission as firms that employ fewer than 250 persons and which have an annual turnover not exceeding 50 million euro, and/or an annual balance sheet total not exceeding 43 million euro. Second, given that the purpose of this study was to examine how SME decision makers perceive risk in internationalisation, all case companies had to be actively involved in international business. We identified eligible cases by using a database containing information on all VAT registered companies in Denmark. Using this database, a list of firms that fulfilled these criteria was developed. Afterwards, these companies were randomly phoned and asked if they wanted to participate in the study and be interviewed. In total, thirty two cases from four different industries were selected. The cases are described in more detail in Table 1.

Data collection

Data were collected using semi-structured interviewing, which is a particularly useful method when the purpose is to elicit individuals’ perception of risk (Hawkes & Rowe, 2008). Furthermore, interviewing is likely the only way to obtain information from SME decision-makers.
(Bell et al., 2004; Carson, 1995) in order to understand how they think, what drives their actions, etc., with respect to the internationalisation of the firm. The reason for this is that a lack of published information (e.g., shareholder reports and commercial analyses.), poor recording of internal data and a marked reluctance of small business managers to complete questionnaires and disclose commercially sensitive information make other forms of data collection problematic (Carson et al., 1995).

When using interviewing, it is important to select key informants who have a thorough knowledge of the topic under consideration and have decision making authority for the general area in which one is interested. The informants used in this study were corporate informants who occupied senior positions (Welch, Marschan-Piekkari, Penttinen, & Tahvanainen, 2002). For example, the informants mostly included Owner-Managers, Chief Executive Officers, and VP of Sales. All interviewees therefore had an in-depth knowledge about their firms’ international operations, including how the internationalisation had developed over time, and they had direct impact upon the decisions related to the internationalisation strategy.

Prior to data collection, an interview guide containing a list of introductory questions to be asked during the interview was developed based on the general research area and the specific research question. First, the participants were asked broad questions about the company to provide background and context specific data to the interview, including when and how the company was founded, the current ownership, present size in terms of employees and turnover, and perceived competitive advantage and performance related to competitors. Next, the participants were asked question related to the internationalisation process, including when the company first started making any sales abroad, how its internationalisation has developed over time, the countries involved, entry modes used, and percentage of revenue coming from foreign markets. Progressively, the participants were asked questions related to the purpose of this study, including
their awareness, attitudes and behaviours related to risk. Throughout the interviews, participants were asked follow-up and probing questions in order to extend the participants answers and get more specific knowledge addressing the questions ‘how’ and ‘why’ (Kvale & Brinkmann, 2009).

In total, 32 interviews were conducted face-to-face and each one lasted between 1.5 and 2 hours. The majority of the interviews were conducted in English; however, the participants were given the option to have the interview in Danish, if they were more comfortable with that. To facilitate analysis and allow for a more thorough examination of the content of the interviews, all interviews were recorded and transcribed verbatim and the interviews in Danish were translated into English (McLellan, MacQueen, & Neidig, 2003). For reasons of anonymity, all company names have been replaced with pseudonyms.

Data analysis

For the purpose of analysing the data, thematic analysis was adopted, which involves the identification and coding of basic themes in the data (Braun & Clarke, 2006; Guest, MacQueen, & Namey, 2012; Ritchie & Lewis, 2003). Thematic analysis is a strategy that involves searching for patterns of experience within a qualitative data set in order to produce a description of those patterns and the relationships between them (Ayres, 2008).

Data analysis proceeded in a sequence of iterative steps. As a first step in the analytic process, we made ourselves familiar with the data by reading and re-reading the interviews in order to get a holistic overview of the data (Ritchie & Lewis, 2003). During this process, we looked specifically to identify statements related to the decision makers’ subjective assessments of risks inherent in doing business in foreign markets (Guest et al., 2012). These were coded using structural codes, in order to identify the data most related to our research question (Saldana, 2013). This resulted in the identification of large segments of text related to the participants’ subjective
assessment of the risks faced when doing business in foreign markets. Next, after coding the data using structural coding, the data was analysed more in-depth, using open coding – a combination of inductive and deductive coding techniques (DeCuir-Gunby, Marshall, & McCulloch, 2011). Both approaches have their pros and cons, which is why combining the two makes it possible to capitalise upon their strengths, while offsetting their weaknesses. Thus, it has been suggested that using this combination increases the rigour of an analysis (Fereday & Muir-Cochrane, 2006). Based on the theoretical background and literature review, a list of sensitising concept driven codes was developed in advance (Huberman & Miles, 1983; Kvale & Brinkmann, 2009). In the theoretical background, building upon insights from psychology and sociology, it was suggested that the managers’ perception of risk associated with internationalisation is influenced by a number of individual, organisational, and cultural factors. In addition to the theory-driven coding, data driven-coding was used to ensure that we remained open to what was in the data, rather than simply applying concepts imported from the literature. Thus, combining the two approaches allowed us to be theoretically informed, without being theoretically blinded (Roulston, 2013).

In order to provide insight into the factors that influence SME decision makers’ subjective assessment of risks faced when doing business in foreign markets the data were examined and coded for relational statements. More specifically, this involved looking for causal and intervening conditions by looking for words that cue relations such as ‘since’, ‘due to’, ‘when’ and ‘because’ (Strauss & Corbin, 1998). By examining and coding the data for causal and intervening conditions and relationships it was possible to make a ‘conceptual leap’ and enrich our understanding of how SME decision makers form judgements about the risks faced when doing business in foreign markets (Klag & Langley, 2013).

During all phases of data analysis, NVivo 10 was used in coding, developing themes and arriving at evidence-based conclusions (Bazeley & Jackson, 2013). NVivo enabled us to deal with
the complexities of qualitative data analysis, provided an audit trail and ensured that the conclusions are verifiable (Sinkovics, Penz, & Ghauri, 2009) thus ensuring rigour in the analysis process and increase the trustworthiness of the findings.

Findings

Perceived risk of doing business in foreign markets

Understanding how decision-makers in SMEs engaged in international business perceive the risks faced when doing business in foreign markets was a key concern in this study. While it is widely acknowledged that internationalisation exposes firms to a wide variety of risks, some of which are unique to firms actively involved in international business, few studies have focused on exploring how those involved in internationalisation experience and perceive these risks.

During the interviews, decision-makers were asked to discuss the main types of risk faced when doing business in foreign markets, to elicit their perceptions of how risky internationalisation is believed to be. As illustrated in 2, variability in the subjective assessment of risk was observed. When looking across all participants in the study, significant diversity and range in decision makers’ subjective assessment of risk was noted. As the illustrative quotes suggest, decision makers’ subjective judgement of risk ranged from not seeing any risks associated with international expansion to seeing internationalisation as a very risky endeavour. In other words, while some of the participating managers, in line with scholars and other experts, regarded internationalisation as a risky strategy to pursue, others seemed oblivious to the risk inherent in pursuing international opportunities and refused to acknowledge or accept the element of risk associated with internationalisation. Thus, our findings show that those who are involved in these activities do not always perceive international business as risky.
During the interviews, the managers were asked about the main risks their companies faced in doing business in foreign markets. Our findings show that internationalisation is being associated with a number of endogenous (i.e., internal) and exogenous (i.e., external) risks. Thus, even if this group of international entrepreneurs was aware that doing business in foreign markets was accompanied by elements of risk, there was no consensus about what these risks were. The exogenous risks include unexpected outcomes as a result of lack of understanding about cultural differences, currency fluctuations, government actions or opportunistic behaviour by foreign partners or customers. Endogenous risks, on the other hand, include unexpected outcomes as a result of resource-related issues, product-related issues or poorly executed strategic decisions. The majority of the international entrepreneurs demonstrated awareness of exogenous risks, whereas only half of the international entrepreneurs referred to endogenous risks during the interviews. However, our findings show that the smaller firms (i.e., firms with fewer than 50 employees) were paying more attention to endogenous risks compared to larger firms. Nearly twice as many small firms referred to resource-related issues when being asked about the main risks faced compared to medium-sized firms. In contrast, medium-sized firms were more attentive to exogenous risks, especially risks related to cultural differences and political issues. Thus, firm size appears to have an impact on the types of perceived risk.

While the majority of the international entrepreneurs were conscious and aware of potential risks, a noteworthy number of interviewees were seemingly oblivious to the risk inherent in
pursuing international opportunities for SMEs. One informant stated: ‘I would never look at it [internationalisation] as a risk’ (VP Sales, SourceCo), whilst another stated, ‘I don’t really see a lot of risks’ (CEO, DesignCo). Thus, contrary to the conventional wisdom, some international entrepreneurs do not experience internationalisation as an action accompanied by or involving risk. For instance, the CCO of SourceCo, whose primary activities include selling software and consultancy services, is a good example of this. As illustrated by the quotation below, he refuses to see internationalisation as risky, and rather categorises it as a challenge, that is, a test of one’s abilities. He stated ‘I would never look at it [internationalisation] as a risk. I would rather see it as a challenge’. This suggests that risk is perceived as something that is uncontrollable and independent of managerial skills and competencies.

**Factors influencing risk perceptions**

Risk factors refer to factors that increase individuals’ perception of risk, in this case, their perception of the risk associated with doing business in foreign markets. Our findings suggest that psychic distance is one of the main drivers of risk perception among international entrepreneurs. By psychic distance, we refer to ‘the perceived difference between the characteristics of a firm’s domestic environment and those of a foreign country’ (Child, Rodrigues & Frynas, 2009, p. 200). Ghemawat (2001), based on the work of Johanson and Vahlne (1977), argues that distance may originate from differences along cultural, administrative, geographic and economic dimensions. During the interviews, international entrepreneurs explained how different dimensions of distance affect their perception of the risk associated with internationalisation. First, geographic distance was found to influence international entrepreneurs’ perception of risk. As explained by the CEO in DesignCo: ‘When you have outsourced your production it becomes more difficult, simply because of the distance’, whereas another informant stated, ‘If you start receiving complaints from
customers far away, it can seriously threaten the survival of the company’. Thus geographic
distance appears to introduce friction and complexity to cross-border activities, making it more
difficult for SMEs to conduct business in these markets.

Distance also has cultural, administrative or political, and economic dimensions that can have a significant impact on the international entrepreneurs’ assessment of risk. The factor most often referred to by the international entrepreneurs interviewed was related to cultural distance, that is, the perceived differences in norms and values between the firm’s home country and foreign countries. Increased cultural distance was often associated with an increase in perceived risk. Many of the international entrepreneurs interviewed mentioned how lack of understanding regarding cultural norms and values often increased misunderstandings and in general made it more difficult for companies to conform to these norms and values. Differences in language were also mentioned as a source of risk by a number of informants for many of the same reasons as mentioned above. The CEO of DenimCo, whose primary activities include designing, producing and selling fashion wear, explains how the Russian market is considered riskier compared to some of their other markets. More specifically, he states, ‘It would be very difficult for us to do things differently in Russia because you don’t speak the language and they don’t speak English or German or whatever’. Thus, according to our findings, the perceptions of differences in terms of language, beliefs, attitudes and traditions were related to SME decision makers’ assessment of risk in internationalisation.

Another factor that was often mentioned by the interviewees was related to differences in country characteristics, including the political system, business environment and practices. In addition, they often referred to political and institutional conditions when assessing the risk inherent in international expansion. For instance, a number of informants argued that the risk inherent in doing business in foreign markets increased when the political and institutional
conditions were poorly developed or even corrupt: ‘Corruption seems to be an immanent risk and we have actually decided not to pursue any business in Russia because of corruption. When we started in Russia we quickly faced some people that wanted money’ (MobileCo). Thus, findings suggest that psychic distance is one of the main drivers of risk perception in internationalisation.

Experience was also found to have an impact on decision makers’ risk perceptions. Experience may act as a filter or heuristic used to evaluate and prioritise the multitude of risks faced. Within international business research, experience, that is the experience that individuals and firms accrue from operating internationally, is also a key concept in explaining firm internationalisation (Clarke, Tamaschke, & Liesch, 2013). In the literature on internationalisation, experience is seen as leading to experiential learning, which in turn, decreases perceived uncertainty and increases commitment to, and knowledge of, international markets (Forsgren, 2002; Johanson & Vahlne, 1977; Michailova & Wilson, 2008). Thus it can be expected that international experience decreases perceived risk (Figueira-de-Lemos et al., 2011).

In line with this argument, our findings show that individuals who have not experienced negative or unexpected outcomes when doing business in foreign markets are more likely to believe that capturing international opportunities and doing business in foreign markets is unlikely to have detrimental consequences for the firm and, therefore, their risk perception decreases. However, while experience in some situations led to perceptions of lowered risk, the opposite was also true. In some cases, previous experience intensified the managers’ perception of risk. For instance, those who had previously experienced unexpected outcomes or losses when engaging in international business were more likely to accept that internationalisation involves risk. To give a couple of examples, the decision maker in MobilCo stated: ‘In Russia we decided not to start anything. We did a bit of investigation and we ran into some people, who wanted money. Corruption seemed to be an immanent risk’, while another one stated, ‘You quickly realise that there are huge differences.
What I mean is that I have experienced this in my previous job. Huge differences in the way that people react in different business situations’ (GreenCo).

By contrast, managers’ risk perception seemed to decrease if the SME has been spared from suffering losses or unexpected outcomes when engaging in international business: ‘Historically speaking, the company has had relatively few losses on debtors and the risk of a significant loss on all receivables is considered to be limited’ (MobileCo). Thus, direct experience is a strong factor in risk perception.

However, managers were also learning about risks through indirect experience. For instance, knowing someone who has had an unpleasant experience from engaging in international business makes it easier for individuals to imagine and realise the presence of risk in international expansion. For example, the informant from TechniCo explained how his knowledge of others who have suffered adverse outcomes from expanding into certain foreign markets has intensified his awareness of these risks: ‘There are so many who have gone over the edge which is why we’re very reluctant to go there’. Hence, through experience, managers learn about the risk implications of doing business in foreign markets. This means that previous experience, either direct or indirect, may distort perceptions of risk, by either intensifying or diminishing perceived risk, depending on the type of experience. While direct experience may increase awareness and acceptance of risk, not having experienced negative or unexpected outcomes from previous international experience may lull the manager into a false sense of security.

**Perceptions of risk-relievers**

In addition, SME decision makers’ core self-evaluations also appear to have an impact on their perceptions of risk and act as risk-relievers. Core self-evaluation is a psychological construct that defines how individuals evaluate themselves and their relationship with the environment (Hiller
According to our findings, two aspects of core self-evaluation – internal locus of control and self-efficacy – were associated with lower perceptions of risk. SME decision makers with an internal locus of control have a stronger sense that they can control their environment and assume that risk can be reduced by using their skills. As the respondent of a company producing accessories articulates, ‘If you have done your homework diligently, selling products in foreign markets doesn’t translate into higher risk’, while another CEO argued ‘I would never see internationalisation as a risk. I would see it as a challenge’. By contrast, SME decision makers with an external locus of control, meaning that they perceive the outcome of their decisions to be outside their control, or perceive themselves as ill-equipped to achieve the expected outcomes, had a tendency to experience negative emotions, such as anxiety and fear, and perceived a higher degree of risk associated with doing business in foreign markets.

Whereas locus of control refers to a person’s belief that he or she can influence the environment, self-efficacy is a belief in one’s own ability to perform a given task (Wood & Bandura, 1989). Our findings indicate that perceptions of self-efficacy play an important role in forming SME decision makers’ perceptions of the risk inherent in international business activities, by affecting their sense of power over decision outcomes. In other words, the perception of self-efficacy also led the SME decision makers to believe that if they do their part of the job they will achieve the expected outcomes of their decisions. For example, the CEO of AirCo commented, ‘I would say that we have been lucky and skilled, which is why we have been able to identify and correct errors when expanding into foreign markets. But that is primarily because we have taken certain decisions and precautions’. Because these SME decision makers assumed that the outcomes of their decisions were determined by their own abilities and they had confidence in themselves and their abilities, they perceived lower levels of risk in internationalisation. Thus, those SME decision-makers who perceived the outcomes of their decisions related to internationalisation to be
determined by their own abilities and who had confidence in themselves and their own abilities perceived lower levels of risk in internationalisation.

**Impact of perceived risk on firm internationalisation**

The final major theme identified in the study was related to the link between risk perceptions and actions in relation to firm internationalisation. In line with existing research, our findings suggest that perceived risk influences strategic decisions, including those on internationalisation. Our findings from the interviews suggest that, to a certain extent, the managers consider risk to be a constraining factor in the internationalisation process. The international entrepreneurs interviewed were generally characterised by a low propensity to take risks. Thus, unless risk was considered sufficiently low, these international entrepreneurs would refrain from capturing or exploiting international opportunities. For instance, the CEO of CleanCo stated, ‘*We are very conservative. We don’t throw ourselves into something that could threaten our existence. So we don’t take any kinds of risk, when expanding our business internationally … this can of course constrain our growth … this is of course very unfortunate, when we can see that the market is already there*’.

Similarly, the CEO of MariCo argued, ‘*Overall we don’t take any risk. That’s something time has taught us*’. In addition to constraining growth, perceptions of risk can also lead to de-internationalisation, that is, shift to a strategic configuration that has a lower international presence (Turner, 2012). If a manager becomes aware of potential risks or experiences unexpected outcomes in a foreign market where their firm is already active, he or she may decide to withdraw from that market. Thus, our findings suggest that managerial perceptions of risk may hinder or inhibit firm internationalisation or even cause the firm to de-internationalise, by withdrawing from markets in which the company is already active. Accordingly, perceived risk constitutes a major perceptual barrier to SMEs’ internationalisation.
Discussion

Numerous authors have identified risk, or managers’ assessment of risk as a key concept in explaining the internationalisation of SMEs. In this study, we explored how decision makers, in a range of Danish SMEs actively involved in international business activities, perceive the risks associated with internationalisation. Analysis reveals three themes related to managerial risk perceptions: (a) perceptions of riskiness when doing business in foreign markets, (b) sources of perceived risk and risk-relievers, and (c) impact of perceived risk on firm internationalisation. In the following section, we discuss the main findings of the study in terms of their importance and meaning. Furthermore, we compare and contrast our findings with extant literature to identify any discrepancies or unexpected findings.

The first theme identified was related to perceptions of riskiness in doing business in foreign markets. While internationalisation creates opportunities for SMEs, it also comes with considerable risks, particularly for SMEs (Fernhaber & McDougall-Covin, 2014; Lu & Beamish, 2001). Interestingly, however, findings from the interviews suggest that international entrepreneurs do not always consider internationalisation to be accompanied by risk, as suggested by experts and scholars. While the majority of informants did demonstrate knowledge of potential risks accompanying internationalisation, a noteworthy proportion of the international entrepreneurs interviewed seemed oblivious to potential risks when doing business in foreign markets. This is in line with Liesch et al. (2011), who suggest that managers’ ignorance of risk protects them from the harsh realities of international business. In addition, risk was considered a perceptual barrier that obstructs or impedes internationalisation. Thus, results of our study seem to provide an alternative explanation for what makes SME managers act upon international opportunities. The dominant perspective portrays them as risk-seeking individuals that have a preference for risk. By contrast,
our findings suggest that the capture of opportunities across national borders may be the outcome of lower levels of perceived risk, rather than a higher propensity or willingness to take risks. This is in line with emerging research in entrepreneurship, which challenges the basic idea that entrepreneurs have a higher risk propensity, even concluding that entrepreneurs, to a certain extent, are risk avoiders (Miller, 2007; Miner & Raju, 2004). Similarly, Janney and Dess (2006, p. 386) warn against using objective entrepreneurial action as a proxy for risk propensity because ‘an action may appear risky to an established firm; however, in an entrepreneurial context it might actually prove less so. An entrepreneur who accepts such risks will appear to be accepting greater levels of risk relative to their more established counterparts, even though the entrepreneur does not perceive this greater risk’. Apparent risk-seeking behaviour, as in internationalisation, may then be illusory when considered at the level of the individual decision-maker perceptions (Liesch et al., 2011). Hence, in accordance with Sommer (2010), we believe that future studies could benefit by shifting focus from ‘risk propensity’ to ‘risk perception’.

The second theme identified was related to sources of perceived risk and risk-relievers. The perceptions of riskiness when doing business in foreign markets appear to be influenced by a number of factors, some of which increase perceptions of risk, while others reduce perceptions of risk. Thus, our study contributes to an area about which little is currently known, i.e., the antecedents of risk perception (Claver et al., 2008; Keh, Foo, & Lim, 2002; Sitkin & Weingart, 1995). In line with existing research on entrepreneurs’ assessments of the risk inherent in internationalisation, our findings suggest that the notions of risk associated with international activities are influenced by psychological characteristics of the individual decision-maker (e.g. Acedo & Jones, 2007; Kiss et al., 2013). First, distance appears to be a primary driver of risk perception. In general, greater distance appears to be associated with greater perceived risk. This seems to be a plausible explanation in light of previous studies. First, behavioural theorists conclude
that distance creates uncertainty (Makino & Tsang, 2010), while risk is defined as an event where the outcome is uncertain (Aven & Renn, 2009). Second, cultural distance has been proposed as one of the greatest sources of risk and uncertainty in the international business context due to its tacit nature (Hakanson & Amos, 2010; Erramilli & D’Souza, 1995; Anderson & Gatignon, 1986). Third, previous research suggests that distance increases the challenge of achieving and sustaining successful cross-border activities, by introducing friction (Shenkar et al., 2008) and complexity (Vermeulen & Barkema, 2002) to cross-border activities.

In addition to distance, risk perceptions appear to be influenced by the psychological traits of the entrepreneur. Results indicate that self-confidence, internal locus of control, and high self-efficacy are all risk-relievers. Locus of control (i.e., whether control is related to the person or external to the person) has successfully been related to variations in managerial perceptions of organisational risks (Smallman & Fischbacher-Smith, 2003). Individuals having an internal locus of control have a stronger sense of control in relation to their surroundings, which is why they have a tendency to perceive relatively low personal and general levels of risk compared to individuals with an external locus of control (Kallmen, 2000). Others have found that individuals tend to underestimate risks that are perceived to be under their control (Nordgren, Van der Pligt, & Van Harreveld, 2007). Similarly, self-efficacy has also been related to risk perception in prior research (Kallmen, 2000). Self-efficacy is considered an important concept in understanding variations in risk perception, given that it concerns individual’s sense of control and is considered a reflection of uncertainty (Smallman & Fischbacher-Smith, 2003). Previous studies have shown that without a strong belief in one’s own abilities, many situations may appear scary and risky (Bandura, 1997). By contrast, individuals with a strong sense of self-efficacy have more confidence in their own abilities to control and reduce perceived risks (Sheeran, Harris, & Epton, 2014). In other words, individuals who believe risks can be controlled and believe in their own abilities to manage
these risks are likely to have lower perceptions of risk. Accordingly, it seems plausible to propose that differences in perceived risks accompanying internationalisation are, to some extent, due to differences in locus of control and self-efficacy.

Finally, our findings underscore the importance of international experience in explaining managerial assessments of risk in the internationalisation of SMEs. Our findings show that international experience affects how managers perceive risks, by acting as a filter or heuristic used to evaluate and prioritise the multitude of risks faced. International experience is a key concept in explaining firm internationalisation, where it refers to the experiences that firms accrue from operating internationally (Clarke, Tamaschke, & Liesch, 2013). This is in line with previous studies, where it has been argued that firms may learn about the implications of environmental contingencies through experience (Miller, 2009). Individual decision-makers learn to attend certain environmental factors, while ignoring or neglecting others (Ocasio, 1997). Perceived levels of risk increase if risk has been experienced or can be readily imagined (Kahneman, Slovic, & Tversky, 1982). This ‘availability heuristic’ means that previous experience may distort perceptions of risk, by either intensifying or diminishing perceived risk, depending on the type of experience. Hence, our findings support the arguments of Liesch, Welch, and Buckley (2011, p. 858) who argue, ‘History matters in the formation of perceptions about uncertainty and in assessments of risk, soaking into habits and ways of viewing the world, providing the frame of reference for how new situations are assessed and actions adopted’.

The third theme identified was related to the impact of perceived risk on firm internationalisation. In line with existing literature, risk was considered a constraining factor hindering the firm’s ability to capture opportunities in foreign markets. Thus, perceived risk constitutes a perceptual barrier to SMEs’ internationalisation. Results show that the evaluation of international opportunities is, to a certain extent, influenced by the international entrepreneur’s
perceptions of risk; that is, SME decision makers consider international opportunities less attractive when the perceived level of risk is high and vice versa. These findings are consistent with a number of previous studies. For instance, Acedo and Florin (2006) found that SMEs were more committed to internationalisation and increased their involvement in foreign markets when managers perceived lower levels of risk associated with foreign activities. Similarly, Kiss, Williams and Houghton (2013) found that the internationalisation patterns of SMEs are strongly driven by managerial perceptions of risk. More specifically, they found that the international scope of SMEs increases when SME management perceive lower levels of risk. In other words, in order to achieve successful internationalisation and capture opportunities across national borders, risk must be deemed sufficiently low. Thus, in order to understand what promotes or constrains internationalisation in SMEs, it is important to understand how SME decision makers evaluate international opportunities and the role of risk perceptions in that process.

Conclusion

Solving the theoretical puzzle of why some SMEs and not others identify and capture international opportunities and why some SMEs internationalise more aggressively than others has long intrigued international business researchers. Our research contributes to this body of literature and builds on the cognitive perspective on the internationalisation of SMEs by focusing explicitly on the micro-foundations of decision making as they relate to firm internationalisation. By demonstrating a link between managerial cognition and decisions related to internationalisation, our findings emphasise the central role played by the managerial risk perceptions, and add to the understanding of the role of cognitive traits in SME internationalisation. How SMEs decide to internationalise or to increase involvement in foreign markets has, so far, received surprisingly little attention in the literature (Child & Hsieh, 2014; Schweizer, 2012). Thus, our study contributes to
the growing literature on the micro-foundations of internationalisation strategy (Morris, Hammond, & Snell, 2014; Prashantham & Floyd, 2012; Williams & Grégoire, 2014). Furthermore, our study enriches the existing literature on the internationalisation of SMEs by identifying a number of risk increasing and risk reducing factors that appear to be related to SME decision makers’ risk perceptions. Previous research emphasises that managers’ perceptions of risk, rather than objective risk assessments, drive strategic decisions, including those on internationalisation (Demirbag et al., 2010; Forlani, Parthasarathy, & Keaveney, 2008; Kiss et al., 2013). For instance, risk perceptions have been identified as a key concept in explaining propensity to internationalise (Cavusgil & Naor, 1987), speed of internationalisation (Acedo & Jones, 2007; Oviatt & McDougall, 2005), choice of foreign operation mode (Ahmed et al., 2002; Demirbag et al., 2010; Schwens et al., 2011), and the number of countries in which SMEs are actively involved (Kiss et al., 2013). Thus, understanding the sources and drivers of risk perception among managers can help explain decision making in relation to firm internationalisation, including why some, and not others, identify and decide to capture opportunities across national borders.

While this study addresses an important void in the existing literature and provides insight into SME internationalisation in terms of the sources and implications of risk perception for SME internationalisation, it has several limitations. These limitations themselves represent promising avenues for future research. Because our study deals only with a limited number of cases, which have been selected for theoretical rather than statistical reasons, our empirical results have limited statistical generalisability (Tsang, 2014; Yin, 2009). In order to generalise our findings to a wider population, future research should focus on replicating our findings with a larger sample of randomly selected SMEs. In addition, our findings suggest that risk is a perceptual barrier, constraining SMEs’ ability to exploit international opportunities. SMEs appear to be unable to capture opportunities across national borders and increase involvement in foreign markets unless
risk is considered sufficiently low. Hence, future research should focus on examining how SMEs and international entrepreneurs manage and cope with their concerns about perceived risk, however substantial, in order to identify and exploit international opportunities. Finally, given the nature of the sample, it was impossible to examine the role of culture in international entrepreneurs’ perceptions of risk. It has been argued that individuals’ assessment of risk is and remains context bound and that individuals’ perception of risk can only be understood against the background of their embeddedness in a sociocultural background (Douglas & Wildavsky, 1983; Taylor-Gooby & Zinn, 2006a; Wildavsky & Dake, 1990). Similarly, Gephart, Van Maanen and Oberlechner (Gephart, Van Maanen, & Oberlechner, 2009) argue, ‘Certain cultures notice, address, and respond to particular phenomena as risks and fail to attend to other potential risks based on cultural logics and beliefs’. Hence, individuals’ perceptions of risk are likely to vary across cultures, hence future research may seek to replicate this study in other cultural contexts, in order to examine how cultural differences might add to our understanding of the factors influencing entrepreneurs' perceptions of the risk accompanying internationalisation. In addition, understanding how and why decision-makers perceive some risks, and not others, will be important for advancing our understanding of international entrepreneurs' risk perceptions and SME internationalisation. The attention-based view of the firm may prove to be a fruitful theoretical perspective for investigating this research question.


Alvarez, S. a., & Barney, J. B. (2005). How do entrepreneurs organize firms under conditions of

Aven, T., & Renn, O. (2009). On risk defined as an event where the outcome is uncertain. *Journal of Risk Research, 12*(1), 1–11.


Table 2: Overview of variability in risk perception

<table>
<thead>
<tr>
<th>Perceived level of risk</th>
<th>Supporting quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>“Definitely! Internationalization is a very risky. Out customers are struggling and many are forced to go out of business. So it is extremely risky.” (Owner-manager, LeviCo)</td>
</tr>
<tr>
<td></td>
<td>“If you are not capable of delivering reliable products that live up to the expectations of customers in foreign markets it can have fatal consequences for the firm and threaten its survivability.” (CEO, AirCo)</td>
</tr>
<tr>
<td>Moderate</td>
<td>“Well of course there is some risk. For instance, you have exchange rate risk. But in general I only see advantages. Internationalization enables you to spread your risks across multiple markets” (Owner-manager, PrivateCo)</td>
</tr>
<tr>
<td>Low</td>
<td>“I do not really see any risk associated with internationalization. I would rather see it as a challenge.” (Sales Director, AgriCo)</td>
</tr>
<tr>
<td></td>
<td>“I would never see internationalization as a risk. I would see it as a challenge. But we don’t have any risks.” (Director of Operations, SourceCo)</td>
</tr>
</tbody>
</table>

Table 3. Overview of perceived risks when doing business in foreign markets

<table>
<thead>
<tr>
<th>Risk factors</th>
<th>Description</th>
<th>No. of mentions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exogenous:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural risk</td>
<td>Unexpected outcomes as a result of a lack of understanding about cultural differences (Hain, 2011)</td>
<td>25</td>
</tr>
<tr>
<td>Financial risk</td>
<td>Unexpected outcomes as a result of currency fluctuations (Jacque, 1981)</td>
<td>9</td>
</tr>
<tr>
<td>Political actions</td>
<td>Unexpected outcomes as a result of government actions (Baekert et al., 2014)</td>
<td>7</td>
</tr>
<tr>
<td>Relational risk</td>
<td>Unexpected outcomes as a result of other opportunistic behaviour (Das &amp; Teng, 2001)</td>
<td>8</td>
</tr>
<tr>
<td>Endogenous:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial risk</td>
<td>Unexpected outcomes as a result of poorly developed or executed business strategies, tactics, or procedures (Cavusgil et al., 2014)</td>
<td>10</td>
</tr>
<tr>
<td>Product-related risk</td>
<td>Unexpected outcomes as a result of product-related issues, including issues related to product quality.</td>
<td>16</td>
</tr>
<tr>
<td>Resource-related risk</td>
<td>Risk that the adopted strategy will require resources that the firm does not have, cannot acquire, or cannot spare (Ghoshal, 1987)</td>
<td>10</td>
</tr>
<tr>
<td>Pseudonym</td>
<td>Sector</td>
<td>Year of Establishment</td>
</tr>
<tr>
<td>-----------</td>
<td>------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>AirCo</td>
<td>Manufacturing</td>
<td>1991</td>
</tr>
<tr>
<td>GreenCo</td>
<td>Textile</td>
<td>1916</td>
</tr>
<tr>
<td>CoolCo</td>
<td>ICT</td>
<td>1997</td>
</tr>
<tr>
<td>PrivateCo</td>
<td>Textile</td>
<td>1965</td>
</tr>
<tr>
<td>PolyCo</td>
<td>Manufacturing</td>
<td>2000</td>
</tr>
<tr>
<td>BlueCo</td>
<td>ICT</td>
<td>2003</td>
</tr>
<tr>
<td>WashCo</td>
<td>Manufacturing</td>
<td>1843</td>
</tr>
<tr>
<td>TechCo</td>
<td>Textile</td>
<td>1989</td>
</tr>
<tr>
<td>DeliCo</td>
<td>Food</td>
<td>1986</td>
</tr>
<tr>
<td>AccesCo</td>
<td>Textile</td>
<td>2003</td>
</tr>
<tr>
<td>MeatCo</td>
<td>Food</td>
<td>2001</td>
</tr>
<tr>
<td>MicroCo</td>
<td>ICT</td>
<td>2001</td>
</tr>
<tr>
<td>ShareCo</td>
<td>ICT</td>
<td>2003</td>
</tr>
<tr>
<td>WindCo</td>
<td>ICT</td>
<td>2004</td>
</tr>
<tr>
<td>GateCo</td>
<td>ICT</td>
<td>2001</td>
</tr>
<tr>
<td>AgrCo</td>
<td>Manufacturing</td>
<td>1967</td>
</tr>
<tr>
<td>TexCo</td>
<td>Textile</td>
<td>1851</td>
</tr>
<tr>
<td>FeedCo</td>
<td>Food</td>
<td>1992</td>
</tr>
<tr>
<td>SmokeCo</td>
<td>Food</td>
<td>1929</td>
</tr>
<tr>
<td>WorkCo</td>
<td>Textile</td>
<td>1923</td>
</tr>
<tr>
<td>LeviCo</td>
<td>Textile</td>
<td>1987</td>
</tr>
<tr>
<td>DesignCo</td>
<td>Textile</td>
<td>1975</td>
</tr>
<tr>
<td>Pseudonym</td>
<td>Sector</td>
<td>Year of Establishment</td>
</tr>
<tr>
<td>-----------</td>
<td>--------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>MixCo</td>
<td>Manufacturing</td>
<td>1993</td>
</tr>
<tr>
<td>LogiCo</td>
<td>ICT</td>
<td>1987</td>
</tr>
<tr>
<td>CleanCo</td>
<td>Manufacturing</td>
<td>1964</td>
</tr>
<tr>
<td>DairyCo</td>
<td>Food</td>
<td>1984</td>
</tr>
<tr>
<td>FashionCo</td>
<td>Textile</td>
<td>1962</td>
</tr>
<tr>
<td>SailCo</td>
<td>Textile</td>
<td>1983</td>
</tr>
<tr>
<td>ShipCo</td>
<td>Manufacturing</td>
<td>1954</td>
</tr>
<tr>
<td>BuildCo</td>
<td>Manufacturing</td>
<td>1986</td>
</tr>
<tr>
<td>MobileCo</td>
<td>ICT</td>
<td>1993</td>
</tr>
<tr>
<td>SourceCo</td>
<td>ICT</td>
<td>1999</td>
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</table>