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Abstract

The business environment in which SMEs operate is increasingly turbulent and uncertain and strategic decisions require managers to take into account numerous risks in order to meet their objectives. This is the case with the internationalization decisions of SMEs whose success is not guaranteed. How are the risks of such activities assessed in SMEs knowing that strategic decisions are the responsibilities of the owner-manager and that this assessment is based on the perception of evaluators? The study of five Canadian SMEs that decided to subcontract part of their production to China sheds light on this issue that is little addressed in the literature. Interviews with two managers, including the owner confirm the influence of each person's attitude towards risk as well as their experience with the evaluated risk, their expertise and the feeling of control over risky situations. This study enriches the work on risk management in SMEs and suggests, from a practical point of view, that this management should be carried out collegially rather than entrusted to a single individual.

Key words: Risks, risk perception, manager subjectivity, SMEs, international outsourcing.

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1. Introduction

The economic and business environment in which companies, including SMEs, operate is increasingly complex and uncertain (Ahokangas et al., 2022). This situation can be ascribed notably to the changes that have occurred in the business world in recent years, ensuing from the opening of international markets, the development of transportation and communication systems, the rapid evolution of technologies, the reduction of product life cycles, and the emergence of countries such as China, Mexico, Chile, Vietnam, India and South Africa (Treillet, 2018; Blancheton, 2017; Hilletofth and Hilmola, 2010). These countries, which have developed significant industrial capabilities, have become serious competitors to developed countries, contributing to the growth in the level of uncertainty about the success of business operations (Treillet, 2018; Blancheton, 2017; Sinha et al., 2011). This uncertainty makes it difficult for managers to adopt strategic decisions, since it leads them to question their relevance and their utility, given the lack of guarantee of their success (McMullen and Shepherd 2006). It is therefore at the origin of a number of risks that can hinder the achievement of their objectives, the likelihood of which and the scale of the impact of which are estimated on the basis of the evaluator's perception.

Risks perceptions become more important in situations of pronounced uncertainty and high-risk activities (Lee, 2008; Sharma et al., 2020). It is specific to each individual and varies based on different parameters, such as their profile (age, gender, experience, education), their attitude towards risk, the quality of the information available as well as their cognitive biases. These biases are mainly composed of the individual's overconfidence and its illusion of control (Oliveira et al., 2020; Simon et al., 2000). A perception of high risk associated with certain strategies, such as international outsourcing and innovation, might cause SMEs to be reluctant to implement such strategies (Chen et al., 2015; Liesch et al., 2011; Lee, 2008). Whereas large firms possess diverse resources and skills to identify and manage risk, SMEs have much fewer resources and are thus more vulnerable to the consequences of a risky decision (Ur Rehman and Amwar, 2019; Brustbauer, 2016; Verbano and Venturini, 2013). With the lack of resources in these companies, one of the questions to ask is: Can SMEs correctly identify and assess risks inherent to their strategies?

Given that risk assessment (consisting of identification and evaluation) is a decisive step in strategic decision making (Marcelino-Sàbada et al., 2014), and is increasingly associated with the success of SMEs (Gao et al., 2013; Kim and Vonortas, 2014), it is important to explore and analyze how the evaluation and assessment of risks is influenced by the managers' perceptions and identify what are the factors influencing these perceptions. This knowing that management and control of risks inherent to their strategic decisions enable SMEs to realize a superior performance as highlighted by Ur Rehman and Amwar (2019).

Within SMEs, the lack of resources implies that this identification and management process is often carried out by a single person (e.g. owner-manager, production manager, or sales manager). If this person is risk-averse, he or she will be reluctant to invest, while conversely, a more risk-tolerant individual might be reckless and commit the company to highly uncertain projects (You et al., 2013) even though the business is poorly protected against possible harmful situations. It might then be preferable, when deciding to undertake new projects, to enlist multiple evaluators who could contribute their experience and expertise to reduce the influence of each individual's

perception and subjectivity on their evaluation results (Oliveira et al., 2020; Zhu and Deng, 2020; Van Winsen et al., 2016; Falkner and Hiebl, 2015).

The literature emphasizes the importance of perception in risk assessment (Liang et al., 2024; Shafer et al. 2023; Khanal, 2022; Oliveira et al., 2020; Ainia and Lutfi, 2018; You et al., 2013; Lee, 2008), but only few studies have analyzed perception in the context of international outsourcing decisions made in SMEs and used case study and interviews as we did in this article (Weerakkody and Irani, 2010). Owner-managers can have different perceptions of risks than other managers in the company (Crovini, Santoro and Ossola, 2021; Ainia and Lutfi, 2018; Miner and Raju, 2004, in Liesch et al., 2011; Acar and Gök, 2011), particularly because they suffer the financial consequences of bad decisions and assume many roles and responsibilities in their organization. This leads us to question whether their assessment can be different than that of their collaborators? Thus, we ask the following question:

How can the characteristics and experiences of the evaluator influence the perceived risks of a strategic decision?

The objective of our research is to answer this question, to analyze the factors influencing risk perception and to show that risk assessment is specific to each evaluator in a company. To do so, we will analyze how SME managers involved in international outsourcing decisions perceive risks and their criticality. The decision of transferring production activities from America to Asia presents a high risk of failure for Western companies (Shi, 2007), especially given the marked differences in work methods in each country (Batsakis and Singh, 2019) and the significant cultural and psychic distance (Chen et al., 2020, 2020; Li and Karakowsky, 2001).

Our analysis answers Falkner and Hiebl's (2015) calls for more research on risk identification and evaluation in SMEs, as well as more recent propositions of Siegrist and Árvai (2020) to look at the influence of decision-makers' heuristics and experience on their assessment of risks and the accuracy with which they can measure different new situations. Whereas in their review of the risk management literature, Falkner and Hiebl (2015) emphasize the value of clearly understanding the tools used to identify risks and how often they are applied, we focus on the subjective side of this step, which affects the results obtained. Eduardsen and Marinova (2020) recall that an increasing number of SMEs are engaged on international activities, even though there are several risks related to these activities, we know little about how these risks are evaluated. We also enrich the literature by comparing the risk assessment carried out by a SME owner-manager and by a manager, both of whom are directly involved in the subcontracting project. To determine whether the owner-manager is more cautious than their employees, we compare assessments made regarding the same decision. This while keeping in mind that risk evaluation is based on measuring the possibility of occurrence of a risk and the magnitude of its impact (Schuyler, 2001). Thus, as additional contribution, in our study we highlight how the perception of risk can have an impact on both components of risk criticality, which, to our knowledge, was not studied before. Finally, our results show that it may be imprudent to leave the risk identification stage of strategic decisions in an SME to a single manager.

Thus, our research will add value to the field of risk management and especially to the literature on risk perception and factors influencing it. We also contribute to literature on the relationship between risk perception and decision making in SMEs and on the differences in opinions between the owner-manager and other managers in the latter. Our results lead to a better understanding of international outsourcing decision failures in SMEs, especially in the case where risks related to these decisions are estimated by one manager with little international experience or with an imprudent attitude towards risky events.

To meet our research objectives, we conducted a multiple case study involving five Québec firms that had outsourced part of their production to China. Specifically, we interviewed two managers in each company, including the owner manager, and we asked them to identify and evaluate the risks related to outsourcing in China, which is considered a risky strategy and most of the risks related to it were not well known. Our main objective was to discuss with the interviewed managers the reasons why they assessed the risks the way they did. We wanted to understand the factors that influenced their perception and assessment of the risks involved in their decision to outsource internationally. Since strategic decisions in SMEs are often left to the owner-manager alone, we also wanted to show that this decision might not be optimal, by having another respondent give an opinion on the same decision. As a significant contribution of our study, our results show, in particular, the influence of the experience with the evaluated risk and the one developed over the years in the field of activity. They also suggest that the identification and risk assessment of major decisions that could affect the future of SMEs should always be carried out in a collegial manner in order to mitigate the biases of a single manager.

The first section of the paper presents the review of the literature on risk and risk perception, followed by our methodological framework and the results. The last section contains the analysis of the results, the conclusion, and the research avenues suggested from our findings.

2. Literature review

The increase in uncertainty in the economic environment over the past several years has created new risks for dynamic companies. It has therefore become essential for managers to develop specific skills to improve their decision-making. Risk management is one such skill, which we discuss first from a conceptual standpoint. Then, we highlight the influence of individuals' perceptions on their assessment of particular future situations, along with the extent of the risks they pose for the company.

2.1. Risk assessment and management.

Risk is a polysemous concept interpreted in different ways in different contexts (Silva et al., 2013; Lee, 2008; Althaus, 2005; Schuyler, 2001). This complicates attempts to formulate a universal definition (Lee, 2008). In the decision-making field, risk is associated with the possible occurrence of an event that may negatively or positively affect the achievement of an organization's goals (Brustbauer, 2016; Henschel, 2006). In the context of risk management, however, we emphasize

the negative side in order to prevent organizations from experiencing a loss of value or deterioration in performance (Althaus, 2005; Grant, Edgar, Sukumar, and Meyer, 2014; Reboud and Seville, 2016).

Risk arises from a state or situation present in the organization's environment (Kim and Vonortas, 2014; DuHadway et al., 2019). The occurrence of a risk could prevent a company from meeting its objectives. The source of risk can be endogenous, representing a characteristic of the organization, such as its experience, resources, and capabilities (Barthélemy and Courrèges, 2011; Kim and Vonortas, 2014). It may also be exogenous, representing a characteristic of the external, sociopolitical, economic, and natural environment, such as the state of the local economy and market (Hagigi and Sivakumar, 2009) or representing a unique situation such as the recent Covid-19 pandemic for which managers have no knowledge or response plan (Sharma et al., 2020).

In the context of the international outsourcing of company operations, which is our context of studying risk perception in this article, Weerakkody and Irani (2009) and Alexandrova (2009) identified several sources of risks that may hinder the achievement of this strategy goals in the case of SMEs. Outsourcing has many objectives, such as production cost reduction, flexibility, access to specialized competences and focusing on main activities. While it can have a positive impact on the company performance (Lahiri, 2016), many internal sources of risks are related to it. We can mention difficulties of an informational and organizational nature as well as problems related to the lack of international experience, to making the wrong choice of subcontractor, to shortage in human resources, to supply chain aspects and to operations control (Alexandrova, 2009; Rubesh and Banomyong, 2005; Clegg et al., 2005; Erber and Sayed-Ahmed, 2005). The external sources that are beyond the firm's control relate to procedural problems, subcontractor employee competencies, the target country's system of governance, as well as its political, economic, social, cultural and legal environment (Alexandrova, 2009; Mcdougall, 2005; Schniederjans and Zuckweiler, 2004; Dhanani, 2004; Kliem, 2004; Chopra and Sodhi, 2004; Prasad and Tata, 2003).

Risk assessment involves identifying and evaluating risks. Identification is one of the most critical steps in strategic decision management (Islam et al., 2017; St-Pierre and El Fadil, 2017; Marcelino-Sàbada et al., 2014; Gao et al., 2013). It consists of detecting situations that may reduce the chances of the company's attaining its objectives. To this end, several techniques can be used, including brainstorming, interview sessions, questionnaires, and checklists (Magro and Kellow, 2004). Risk managers can also consult historical data, conduct theoretical analyses, or talk to experts and others familiar with the company's operations (St-Pierre and El Fadil, 2017). In SMEs, this step could be compromised by the staff's limited knowledge of risk management or lack of experience with emerging risks (Marcelino-Sàbada et al., 2014; Falkner and Hiebl, 2015). An additional obstacle is owner-managers desire to remain in control of decisions and, thus, to conduct this exercise themselves (Ates et al., 2013). This ultimately results in an assessment process that is incomplete and does not allow the company to adequately protect itself against risky situations (Henschel, 2010).

The next step after identification of a risk is evaluation or measurement. Several authors (Legohérel et al., 2003; Acar and Göç, 2011) contend that risk evaluation, which entails determining the possibility of its occurrence and the magnitude of its impact, is specific to each individual. This gives place to risk perception, which can be defined as a way for someone to interpret risks and evaluated it (Siegrist and Árvai, 2020; Ainia and Lutfi, 2018). It refers to the subjective assessment

of the probability of the occurrence of a specified event or situation as well as of the magnitude of its consequences on the (Sjöberg et al., 2004, in Acar and Göc, 2011).

Risk perception is in turn influenced by several factors, which can provide insight into managers' decisions (Shafer et al. 2023; Siegrist and Årvai, 2020; Ainia and Lutfi, 2018; Acar and Goç, 2011). These factors can also serve to identify individuals who would potentially be best qualified to enrich analyses of strategic decisions.

2.2. Definition and determinants of risk perception

A central factor affecting risk perception is attitude toward risk, which is a general personality trait (Shafer et al. 2023; Khanal, 2022; Archad, et al., 2016; Chen et al, 2015; Yordanova and Alexandrova-Boshnakova, 2011; St-Pierre et al., 2011). Risk attitude is the level of one's willingness to accept and take risks in general, while risk perception is more associated with a specific situation, event or investment (Ainia and Lutfi, 2018). Risk-averse leaders will tend to perceive risk in an exaggerated way, and generally avoid development strategies that could benefit their company (Chen et al., 2015; Liesch et al., 2011; Lee, 2008). Conversely, risk takers tend to neglect risk or even undertake projects that may jeopardize the company (Goto, 2007). Chen et al. (2015) confirmed a negative relationship between risk attitude or risk propensity and perceived risk criticality related to the decision to execute a construction project in an international context. Their study of 134 Chinese construction employees found that risk-averse individuals are more likely to overestimate the losses or negative consequences of this decision. Van Winsen et al.'s (2016) study of Belgian farmers shows that perception per se does not have a significant impact on risk management. Rather, attitude toward risk influences management strategies. Thus, farmers who are willing to take risks are more likely to apply proactive risk management strategies, whereas risk-averse individuals prefer to face the consequences and react to reduce the impacts when risks materialize. In an experimental study of 350 students enrolled in an MBA program (with diverse experience), St-Pierre et al. (2011) show that risk-taking propensity measured by the Jackson Profile Index reduces the perceived risk of uncertain situations that SMEs might face. To complete our discussion on risk attitude, it is important to mention that according to prospect theory (Kahneman and Tversky's, 1979), risk avoidance of an individual is greater when threats to his assets are high and losses are salient (Sitkin and Pablo, 1992). Sitkin and Weingart (1995) suggested, that based on this theory, there is a negative relationship between perceived risk and making risky decisions.

Gender also influences risk perception. Studies show that women perceive more risk around them than men do (Zhu and Deng, 2020; Al-Qahtani and Abubakar, 2020; St-Pierre et al., 2011; Andersson and Lundborg, 2007). There are several explanations for this result. For one, women are more concerned with health and safety and with their and their families' survival. Second, some researchers argue that women are less informed than men, or tend to be risk averse (Wachinger et al., 2013; Andersson and Lundborg, 2007; Slovic, 2000). Similarly, St-Pierre et al. (2011) find that male students assess risk in an SME significantly less harshly than female students do.

Acar and Göc (2011) affirm that younger managers have a greater appetite for risk than their older counterparts do, which Gilmore et al. (2004) explain as the fact that risk aversion tends to increase

with experience (Falkner and Hiebl, 2015). More mature decision makers (in terms of age and seniority) were consistently more risk averse than those who were less mature (Sitkin and Pablo, 1992). Contrary to these studies, Wachinger et al., (2013) and Andersson and Lundborg (2007) advance that age does not have a clear influence on risk perception: this influence varies depending on the risk being assessed.

Andersson and Lundborg (2007) report that higher levels of income and education can decrease individuals' perceived criticality of risk (Alqahtani and Abubakar, 2020). The ability to obtain more information and expert opinions thus increases with income level. In addition, higher levels of education give individuals confidence in their ability to be knowledgeable about the risks they want to assess (Wachinger et al., 2013; Andersson and Lundborg, 2007). Similarly, psychological biases such as overconfidence or optimism can affect risk perception and decisions made to manage risk (Caponecchia, 2012; Goto, 2007, Kumar, 2009). Caponecchia (2012) shows that the optimism bias reduces the perceived risk of terrorist actions and consequently, citizens' interest in potentially protecting themselves from such situations.

In addition to personal factors, expertise and experience in a given domain reportedly influences risk perception (Ogouyomi Orobi et al., 2021; Siegrist and Àrvai, 2020; You et al., 2013; Andersson and Lundborg, 2007). Andersson and Lundborg (2007) report that novices tend to overestimate less important risks and underestimate important risks. You et al. (2013), who studied behavior of pilots related to safety measures, underscore the influence of experience and sense of control over the outcome of a given situation on the perception of inherent risks and the behaviors to adopt. Experienced pilots generally believe that they can control negative events and prevent their occurrence, which leads them to consider the risks associated with these events to be lower. In the same way, Qafas and El Bijri (2020) argued that the overconfidence and illusion of control influence decisions in the context of risk, which can lead to errors of assessment (Liang et al., 2024; Qafas and El Bijri, 2020).

Experience with a risk and familiarity with the risky situation also influences individuals' perception (Dikie et al., 2022, Siegrist and Àrvai, 2020; Al-Qahtani and Abubakar, 2020; Achou, 2016; Dionne et al., 2007, Sitkin et Pablo, 1992). Yang et al. (2015) assert that a bad experience with a risk would register negatively in individuals' perception. Oliveira et al. (2020) demonstrate the influence of managers' cognitive biases on their assessment and perception of risks that they have experienced in risky decisions such as in innovation projects. Indeed, experienced leaders will refer to heuristics and what they have experienced in the past to assess different situations by reducing their analysis of new information.

To summarize, the identification and assessment of risks inherent in strategic decisions is influenced, in addition to the organization context (Ganzach et al., 2008), by decision makers' general attitude towards risks, their expertise and experience in the domain of the evaluated risk, their experience with the later, their overconfidence and illusion of control over it (Ogouyomi Orobi et al., 2021; Siegrist and Àrvai, 2020; Alqahtani and Abubakar, 2020; Zhu and Deng, 2020; Archad et al, 2016; Chen et al, 2015; You et al, 2013). Accordingly, when a firm must make risky decisions in areas in which it has little experience and few skills, it becomes vulnerable to its decision maker' characteristics and experience (McMullen and Shepherd, 2006). This leads us to the following proposition: *The individuals' characteristics and experiences can have an important influence on*

their perception of risks, which can cause a difference in risk assessment between managers related to a strategy or a decision adopted by an SME.

As discussed earlier, many factors can influence this perception. Based on our literature review, no study has demonstrated this influence in the case of international outsourcing decisions made by SMEs, that could be strategic for their development. In the next section, we will discuss how we intend to add value to this knowledge.

3. Research objective and methodology

Let us remember that the research objective is to study the assessment of the risks associated with the strategy outsourcing production to China. This decision is considered a risky strategy and most of the risks related to it were not well known. This leaves more room for risk perception differences and provides interesting cases to discover the factors influencing these differences when discussing with SME managers. Specifically, we analyze the factors that can influence the perception of this assessment and we examine whether the evaluation of risks is independent of the assessors.

Considering our objective, the state of knowledge on the field of risk perception and the fact that we wanted to listen to the explanation of the managers regarding their opinion about the evaluation of the risks, our research is mainly exploratory. It adopts a qualitative methodology based on a multiple case study. Consistent with the studies by Guercini et al. (2017) and Yin (2008), this methodology is suited to research such as the present study, which examines a contemporary and complex phenomenon in its context. Further, we also consider, on the one hand, the characteristics of the companies, their products, and internal and external environment, and, on the other hand, the owner-managers' profiles, personal traits and experience. As a target population, we were looking for SMEs (companies with less than 500 employees¹) that respect the following criteria: 1) being a manufacturer; 2) having subcontracted part of its production to China; 3) being located in Québec; and 4) having already received the subcontracted products and delivering them to its customers or using them in its local production. The purpose of these criteria was to ensure that each company selected had completed at least one production cycle and could identify and evaluate the risks associated with all subcontracting activities and decide if the project is a success or a failure. This allows us to discover the factors influencing perception of risks after experiencing it, knowing that we are also interested in the risks that weren't experienced by the interviewed managers to observe the impact of this situation on their perceptions. Twenty companies from the province of Québec (Canada) were identified based on the presented criteria and using information from the data base and contacts of a research laboratory on SMEs. All companies were contacted and five of them agreed to participate in the various phases of the study and data collection. This sample size is in line with the recommendations of Guercini et al. (2017) and Yin (2008) for a multiple case study. The studied SMEs are described in table 1.

¹ This is the official definition adopted by the Canadian Government: <https://ised-isde.canada.ca/site/recherche-statistique-pme/fr>

Table 1:
Participating company information

Business (year founded)	Number of empl.	Main products	Main foreign markets	Experience*
Ceka (1981)	90	Printed circuit boards and complete electronic circuits	United States	11 / 7 / 7
Delta (1991)	4	Leather and synthetic handbag	United States and Europe	18 / 18 / 16
Eska (2001)	50	Single and multi-cavity molds, multi-level molds, etc.	United States	6 / 6 / 6
Fada (1948)	65	Straight and long folding chairs and high end chairs	United States and South America	11 / 11 / 11
Gamma (1968)	200	Anti-vibration products and shoe soles	United States and Europe	40 / 25 / 6
* In number of years: International experience / subcontracting experience / subcontracting experience in China				

Data were collected through semi-structured interviews conducted individually with two executives within each company, including the owner-manager, who played an active role in the outsourcing decision. The interview guide was developed from the literature on the risks of international subcontracting (Rubesh and Banomyong, 2005; Clegg et al., 2005; Erber and Sayed-Ahmed, 2005; Mcdougall, 2005; Schniederjans and Zuckweiler, 2004; Dhanani, 2004; Kliem, 2004; Chopra and Sodhi, 2004; Prasad and Tata, 2003), it was supplemented by interviews with experienced SME managers and validated with experts and researchers (eight people in total). The first part of this guide covers the respondents and the companies' characteristics, international experience and different aspects of their outsourcing strategy in China. The second part of the guide addresses the possible risks and their criticality, corresponding to the identification and evaluation steps in the risk management process.

In this second part, the participants were given a list of risks (to which they could add items) in order to facilitate their answers while ensuring that each participant was subjected to the same information. This could reduce the influence of their perception of potential risks. This grid reduced the likelihood of subjectivity because risks in all company functions were identified. In total, participants identified and discussed 75 risks classified in categories based on their sources (see table 2), such as the economic context, legal aspects, cultural differences, managers' inexperience, as well as logistic aspects. During the interviews, we asked the managers to identify for every category the risks that they faced or could face regardless of whether they had already experienced it or not.

Table 2:

Sources of risk (The number of risks discussed by participants in each category is indicated in parentheses)

Exogenous sources of risk	Endogenous sources of risk
1. Political aspects (6)	1. Management risks and inexperience of executives (16)
2. Economic aspects (4)	2. Human resources (12)
3. Legal and judicial aspects (4)	3. Logistical aspects and control over operations (16)
4. Cultural and social aspects (12)	4. Financial aspects (3)
5. Corruption (1)	
6. Labor costs in China (1)	

After identifying the risks, respondents were asked to measure their possibility of occurrence (O) on a numerical scale [1: very low to 5: very high] and the magnitude of their impact if the risk materializes (I) on the company's objectives [1: very low to 5: very high]. The criticality of a risk, according to Schuyler (2001) and Mitchell (1999), is calculated as the product of these two variables [criticality = O x I]. Since our main objective is to explore the perception differences in risk evaluation, we discussed with the respondents their estimates to discover what factors influenced them.

The profile of each respondent is presented in Table 3. With the exception of D1, all respondents are male and are fairly fluent in French and English, except for E2, who speaks French only.

Table 3:

Respondent Information

Com- pany	Respon- dent	Age	Attitude toward risk	Position held	Internal experience	Experience in the field	Diploma obtained and field	Opinion on success or failure	Experience with subcontracti ng project	Perceived risk of the decision
Ceka	C1	46-55	3.33	President (owner manager)	6 years	30 years	Bachelor of Engineering	Success	Strong	Medium
	C2	36-45	3.66	Director of finance and HR	9 years	9 years	Bachelor of Administrati on Accounting	Success	Very strong	Low
Delta	D1	46-55	3.33	President (owner manager)	15 years	33 years	College diploma in design	Great success	Strong	Low
	D2	46-55	4.33	Vice president	1 year	1 year	Master's degree in music	Great success	Strong	Medium
Eska	E1	46-55	3.00	President (owner manager)	4 years	15 years	Bachelor of Industrial Engineering	Failure	Low	Low
	E2	36-45	3.00	Operations manager	6 years	10 years	Attestation of College Studies	Failure	Low	High
Fada	F1	46-55	3.33	Director of operations	10 years	32 years	Pre- university	Great success	Strong	Low
	F2	46-55	3.33	President (owner manager)	1.5 years	20 years	Bachelor of Business Administrati on	Success	Low	Medium

Slow and complex administrative procedures and different laws			9						20	
Difficulty with legal recourse and inappropriate conflict resolution									16	10
Intellectual property infringement	9	16	16		4	25	12	15	16	10
Breach of contracts or agreements	15	6	12		16	20	12	6	9	15
Cultural and social aspects										
Difficulties in applying certain management and quality control practices	12	16	20		12	6	9	16	12	4
Communication difficulties caused by language or differences in English accent			16							15
Chinese subcontractor misunderstands the technical and design requirements						15		9	16	20
Misunderstanding and communication difficulties	20	20	16		12	15	6	1	20	4
Chinese subcontractors have different perception of certain details	16	9	20					1		15
Corruption										
Possibility of being forced to pay bribes	6	2					8		9	
Cost of labor										
Significant increase in labor costs	12	15	16	20	12	25	12	15	15	6
Management risks and inexperienced executives										
Use of inappropriate communication, control and management methods	6	12	20	3	6	25			6	10
Possibility of making the wrong choice of subcontractor and that the subcontractor lacks the necessary skills	25	3	25		9	15	16	20	12	16
Possibility that the information provided by the subcontractor is not accurate, clear or complete	4		9	8	6	1	16	16	9	25
Possibility that subcontracting costs are underestimated	6	8	16		12	15	9	4	16	16
Possibility that the prospecting phase costs more than expected	1	12	4		2	4	1	1	2	15
Possibility that the prospecting phase takes longer than expected	16	12	16		2	12	12	3	6	16
Production cost overruns and occurrence of hidden costs	12	12	4	2	20	25	8	1	16	6
Human Resources										
Failures in the operational management of subcontracting projects		2	9		8	1	16	20	12	4
Difficulty communicating with the Chinese to explain technical requirements and specifications	9			15						
Difficulty assessing the quality of products manufactured in China and the possibility that these products are defective								20	16	
Employee dissatisfaction and poor executive credibility	16	9			9	20	16	5	8	20
Delivery time overruns						9		9	9	16
Subcontracting cost overruns			4						9	
Logistical aspects and reduced control over operations										
Difficulties in managing inventory and increasing storage time	25	9	20	1			8	9	6	20

Production challenges and disruptions in Canada (including possible rework)	3		9		9	20	8		3	3
Decrease in the quality of products manufactured in China and delivery of defective and non-compliant products	20	6	8	4	12	15	16	20	16	16
The integrity of products transported does not meet expectations	4								6	
Possible increase in transportation costs		2	16		9	1			16	20
Production time overruns by the Chinese (e.g. due to quality issues or late delivery of raw materials)	20	16	12	2	6	16	8	20	12	12
Transportation delays due to strikes in Canada and delays at the Port of Vancouver	12							12	9	
Transportation delays in general	16	8	16	2	4	9	12	16	9	16
Delivery time overruns in general					9	15		20	12	15
Financial aspects										
Production disruptions and delivery delays	4		25			10		4	12	1
Arithmetic average of risks criticality	14,39	10,00	13,88	7,40	8,39	14,13	11,39	11,28	12,56	12,89
Total number of risks identified	26	22	29	9	23	23	21	26	38	32
Number of divergent risk evaluations	16		8		23		15		23	
Number of convergent risk evaluations (the same evaluation)	2		1		0		2		4	

In the next paragraphs, we will comment on the discrepancies in the participants' evaluations. The exploratory approach used to highlight the influence of respondents' characteristics and experience on their assessment of risks give rise to a significant difference on the managers risk perception. The presentation of the cases and the analysis of the results obtained is presented in the following part.

Company Ceka: C1 is the president of the company. During the interview, he mentioned that he has had bad experiences with breaches of contract from Chinese subcontractors, and that he has made some poor choices in the past, which explains, as he stated, why his overall assessment shows a higher degree of risk for the entire project than that of C2 (see the arithmetic average of risks criticalities: 14.39 vs. 10.00 and the number of risks identified). This can reveal the negative influence of bad experiences with the studied project on the evaluation of risks inherent to it. Let us note that C1 has a slightly more cautious attitude towards risk than does C2 (3.33 vs. 3.66), who is a financial and human resources director. The main discrepancies are found in the logistical and production aspects, which is also related to C1's engineering background and the fact that he is responsible for production and quality control operations in the company. For example, C1, assigned a criticality of 20 to the risk of poor quality of products manufactured in China and delivery of defective and non-compliant products. His colleague C2 has less technical knowledge and set this criticality at 6. However, he is more critical of the risks related to financial and management control aspects, which is also related to his training and his functions in the company. The case of Ceka highlights clearly the impact of training on the evaluation of risks. We also noticed that divergences are most often found in the respondent areas of expertise and responsibility in the company, which is in management and legal aspects for C2 and production for C1.

Company Delta: At Delta, D1, the owner-manager, makes a harsher risk assessment than does D2, as shown by the arithmetic average of risks criticalities (13.88 vs. 7.40) and the number of risks

identified (29 vs. 10). He also has a more reserved attitude toward risk (3.33 vs. 4.33), which highlights the impact of the overall risk attitude on evaluation of risky events. D2 has a very short tenure at the company. He is less risk averse, which is reflected in his overall assessment, and the number of risks he identified is very low (10 risks). This is due, as he said, to the fact he joined the company one year before the interview in a period with less problems and difficulties and he didn't experience much risks during this period. D1's previous mixed experiences and difficulties, as she mentioned, especially in selecting subcontractors that did not perform well, are reflected in her evaluation of risks related to production and communication elements. For example, D1, who supervises manufacturing activities, assigned a criticality of 20 to the risk of difficulties in managing inventory and increasing storage time, whereas D2 assigned 1 to this risk. Also, D1 assigned a criticality of 16 to transportation delays in general and 12 to the risk of production time overruns by the Chinese, while D2 assigned respectively 2 and 2 to these two risks. These severe scores sustain the negative influence of bad experience with the studied project on the evaluation of risks related to it. In addition, we have to highlight that the divergence between the respondents of the company Delta may be a reflection of their experience both in the company and in international subcontracting.

Company Eska: At Eska, in contrast to the other companies, E1, the owner-manager, makes a less severe overall assessment than does E2 (arithmetic average of risks criticalities: 8.39 vs. 14.13). Both respondents have an equivalent attitude toward risk, but E1 is older and has more experience in the field (15 years vs. 10 years). E1 has stated that even though his company experienced many risks and that he considers the strategy a failure, the encountered risks can be mitigated and managed, according to his experience with them. E1's ample experience in the field and his sense of control developed over time could explain why his evaluations are lower than those of E2, who also views the outsourcing strategy as a failure. For example, we noticed that E1 considered the risk of using inappropriate communication, control, and management methods lower than did E2 (scores for E1 = 6 and E2 = 15). The same is true for the risk of making the wrong choice of subcontractor and that the subcontractor is lacking the necessary skills (scores for E1 = 9 and E2 = 15). The case of Eska can be an evidence of the positive influence of the sense of control and the long experience on the field on the evaluation of risks.

Company Fada: The case of Fada is different from those of the other firms discussed. At first glance, we see that the arithmetic average of risks criticalities is similar for F1 and F2 (11.39 vs. 11.28), and their risk attitude scores are identical (3.33). However, the data presented in the appendix suggests differences related to occurrences and impacts. In 8 out of 17 risks, F2 rates the occurrence higher than F1 does, whereas for 8 risks he rates the impact as lower. The same criticality can thus result from different positions, which orients the actions to be taken. Some risks, such as those related to the subcontractor prospecting and selection phase and to the beginning of the subcontracting strategy, such as the risk of employee dissatisfaction and reduction in manager credibility, were evaluated more highly by F1 (16) than by F2 (5), because the later, as he said, had not experienced them and did not witness the launch of this strategy. This proves the impact of experiencing a risk on its evaluation. In addition, we noticed that F2 being new to the management of the company is more concerned with financial risks and those that can impact the quality and cost of products, while F1 is more concerned with the possibilities of corruption or the possibilities that the work done by the subcontractor does not meet the requirements. Its longer experience in subcontracting projects could justify this sensitivity.

Company Gamma: At Gamma, we note a comparable overall assessment for G1 and G2 (12.56 vs. 12.89), although G1 is more risk-tolerant than G2 (3.66 vs. 3.33). However, the average risk assessment associated with the exogenous risk sources (see table 2) considered by G1 (16.00) is higher than that of G2 (10.40). G1's experience is different from that of G2: He travelled to China more often because he had to oversee subcontracting activities. Owing to his more frequent relations with subcontractors directly on their territory, he has acquired, as he stated, in-depth knowledge of the difficulties that Gamma could encounter in case of disagreement with its partners. Furthermore, in addition to considering risks related to endogenous factors more critically in general, G2 rated risks that he experienced directly, according to him, such as the risk of employee dissatisfaction and reduced credibility of managers, more highly than did G1. As for other cases, this sustains the influence of experiencing a risk in the past on its evaluation. Also, G2's profile as a trained engineer and quality manager led him to rate the criticality of the possibility that the information provided by Chinese manufacturers was not accurate or complete (25) more highly than G1 (9) did. Related to this rating G2, said that he is very thorough and sought more accuracy in his work. This suggests that training is one of the determinant factors influencing risk perception.

5. Discussion

The results presented in the previous section show that the assessment of the risks associated with a strategic decision can be sensitive to the evaluator's characteristics and experience, which is supported by many researchers (Siegrist and Årvai, 2020; Archad et al., 2016; Chen et al., 2015; Yordanova and Alexandrova-Boshnakova, 2011; St-Pierre et al., 2011; Kahneman and Tversky's, 1979). In all cases, the two evaluators expressed divergent opinions on the recognition of the various risks likely to affect their project, and on the criticality of certain risks. Furthermore, identical criticality is not necessarily associated with the same perception by the respondents, because their assessment of occurrence and impact may differ. This perception gap in occurrence and impact also leads to different response strategies. We also showed that the owner manager of a SME has rarely the same risk assessment than other managers in the company. This finding supports the studies that argue that risk assessment can be evaluator dependent, and that subjectivity in evaluation could put organizations in a more or less favorable position (Bran and Vaidis, 2020; Oliveira et al, 2020; Archad et al., 2016; Chen, et al., 2015; Yordanova and Alexandrova-Boshnakova, 2011; St-Pierre et al., 2011).

The study shows that the factors that influence risk perception and contribute the most to subjectivity of risk assessment are respondents' experience and expertise, training, attitude toward risk, experience with the evaluated risk as well as sense of control over it. This knowing these factors influence individually risk perception, while the interaction between them can have unpredicted impact on how manager perceive risks.

Consistent with what was confirmed by many authors (Yang et al., 2015; You et al., 2013; Caponecchia, 2012; St-Pierre et al., 2011; Goto, 2007; Andersson and Lundborg, 2007), our results show the influence of respondents' training on their risk assessment. As showed by the evaluations of the managers of the company Ceka and Gamma. However, this influence is not constant; sometimes it leads to a higher criticality and sometimes to a lower one, depending on the evaluated risk. Experience in itself is therefore not a complete determinant of risk identification ability and must be added to other elements of the individual's characteristics. In fact, its influence may be contingent (or mediated) to the presence of other individual's characteristics.

Attitude towards risk is more mixed, as illustrated by the interviews with Eska and Gamma management, in contrast to the cases of Beta, Ceka, and Delta and to what was argued by Shafer et al. (2023), Khan, (2022); Archad et al. (2016), Chen et al. (2015) and Kahneman and Tversky (1979) regarding the fact that risk-averse leaders will tend to perceive risk in an exaggerated way. In the Delta case, D1, the owner-manager, makes a harsher risk assessment than does D2 (13.88 vs. 7.40). She has a more reserved attitude towards risk comparing to D2 who is less risk averse (3.33 vs. 4.33), which is reflected not only in his overall assessment, but also in the number of risks he identified (10 risks, vs 29). Also, in the Ceka case, C1 who has a slightly more cautious attitude toward risk than does C2 (3.33 vs. 3.66), has an overall assessment that shows a higher degree of risk for the entire project than that of C2 (14.39 vs. 10.00). The case of Eska is the one that contrasted the most with our expectations. Respondent E1, an owner-manager, exhibited the same attitude toward risk as E2, identified the same number of risks, but his evaluations were much lower. At Gamma, we note a comparable overall assessment for G1 and G2 (12.56 vs. 12.89), although G1 is more risk-tolerant than G2 (3.66 vs. 3.33). In addition, the average risk assessment associated with the exogenous risk sources considered by G1 (16.00) is higher than that of G2 (10.40), which confirms the contrast in the Gamma case.

More directly, risk perception is influenced by the manager's experience with the risk assessed, as well as the frequency of occurrence of that risk for the firm, as observed by Oliveira et al. (2020), Yang et al. (2015), Wachinger et al. (2013) and Cohen et al. (2008). This was the case for the leaders of Ceka, Delta, Fada, and Gamma. For example, the significant differences in the case of Delta between D1's and D2's evaluations of risks are probably partly due to the fact that D2 joined the company a few years after the subcontracting strategy was adopted, and did not experience its difficult moments, as he stated. In contrast, D1 devised the strategies and experienced all the related risks which may contribute to anchor his perception. This was also the case for the Gamma manager (G1), who was more in contact with Chinese partners and had several experiences of misunderstanding with some Chinese citizens. He gave a score of 20 to the risk of misunderstanding and communication difficulties, whereas G2 gave this risk a score of 4. This highlights the importance of having experienced individuals in the studied field and the analyzed project or decision, involved in the risk management process.

Experience and expertise in the company's field of activities, which emerged in the discussions with the managers of Beta, Eska, Fada and Gamma companies, and which was investigated by Liang et al. (2024), Yang et al. (2015) and You et al. (2013), can shape the executives' perception of the criticality of the assessed risks. Indeed, a crucial element that may impact risk perception, albeit one that has been infrequently addressed in the literature, is the sense of control over an evaluated risk, that comes as a result of the experience in the domain of the later. This also brings up the importance of the heuristics that are developed by an individual as result of his experiences, according to Siegrist et Arvai (2020).

It is important to mention that the influence on the risk criticality concerns the two components of this criticality, namely the possibility of occurrence and the magnitude of impact. The difference of perception in the risk criticality components, which has not been addressed sufficiently in the literature, could lead to different risk management strategies applied. As discussed by Oliveira et al. (2020) and Van Wisen et al. (2016), focusing on the possibility of occurrence is more proactive and give more importance to mitigation plans to manage risks, while focusing on the magnitude of

impact, which is more reactive give more importance to contingency plans. For example, the risk of difficulties in applying certain management and quality control practices (3 – 4 vs 3 – 2) and (4 – 3 vs 4 – 1) respectively for Eska and Gamma. The managers of the company Eska gave the same possibility of occurrence (3) but the difference was at magnitude of impact level ($E1 = 4$ vs $E2 = 2$). For the same risk, the managers of the company Gamma G1 and G2 gave 4 to the possibility of occurrence and respectively 3 and 1 to the magnitude of impact. These distinctions in the measurement of criticality can lead to different actions depending on whether managers adopt a proactive or reactive approach, and to disagreements between them.

As cross analysis, we noticed that in the cases of Ceka and Delta, the average of evaluations of the owner manager were higher, while in the case of Fada and Gamma it was the same. Only in the case of Eska the average was lower. This case is interesting as it highlights the influence of the developed sense of control over the risks, since E1 admitted that he didn't manage the risks adequately and that the identified risks can be controlled. In each case, the difference of perception of risk between the two managers was influenced by different factors, such as training for Ceka and Gamma and the experience with the evaluated risk, which increases the estimated criticality for the managers of Ceka, Delta, Fada, and Gamma.

6. Conclusion

The research objective was to analyze the factors that can influence the perception of risk assessment in the case of SMEs transferring part of production to China and to determine whether the criticality of the risks was independent of the evaluators. The literature emphasizes the importance of evaluators' perception on their risk assessment but this perception in the context of decisions taken in SMEs has not been analyzed in depth. Therefore, we conducted a multiple case study involving five Canadian SMEs and interviewed two managers in each company, including the owner-manager, to explore the differences in risk perceptions and the factors that may influence these perceptions.

The literature on international entrepreneurship describes entrepreneurs' ability to face risk, but their ability to identify and measure risk has received scant attention. Our results show that this ability deserves further investigation in that identification and evaluation are activities that rely on perceptions, and owner-managers' perceptions can reveal preferences that are not rational at the economic and business levels, which can lead to a suboptimal decision. We proved that the managers involved in the management of a certain project adopted by the company, including the owner-manager, can have different perceptions of the criticality of risky situations inherent to it.

On the theoretical level, this exploratory study confirms the subjectivity of risk criticality identification and measurement and mainly shows that managers involved in the same project may have differing assessments of significant risks faced by their company. It shows that risk perception is influenced not only by evaluators' characteristics, their general attitude toward risk and their training, but also by their experience and expertise in the area of work, their experience with the risk in question as well as their feeling of control over it. The last three factors influencing the assessment of risk are not well documented in the literature, representing our main contribution in this study and adding more insight in the field of risk perception in the context of SME management. Moreover, our study adds to the knowledge that individuals' perception influences, differently, the assessment of the probability of occurrence of an event, on one side, and the

assessment of the magnitude of its impact on the organization, on the other side. This is an important finding since risk management strategies are linked to this information, in that reducing the probability of risks requires preventive actions, whereas diminishing their impact, which is done after risks arise, is remedial (Hillson et Murray-Webster, 2005; Magro et Kellow, 2004; Noor et al., 2002). Hillson et Murray-Webster (2005) having argued that the planification of actions to manage risks depends on risk perception. The analysis of the separate influence of perception on possibility of occurrence and magnitude of impact was not studied before as far as we are aware, which is a theoretical contribution of our study.

The influence of the manager' profile and experience on the evaluation of risks related to strategic decisions can have an impact on the risk management process, on how the SME implement this process and how it overcome difficulties and control risks. This, implies, as discussed by Crovini et al. (2021), that we have to understand how we can help SME manage risks, knowing that subjectivity is present in all the stages of the risk management process (Bran and Vaidis, 2020). In the field of international management, our results can explain why certain SMEs experienced failure of their internationalization strategies, because they didn't assess, in an optimal manner, risks inherent to these strategies. In fact, one of the success factors of the latter is the capacity of a company to identify and measure risks collectively based on the perception of a group of managers with different profiles and experiences. A disagreement between managers on the assessment of a risk during a risk evaluation process can lead to discussions that will enrich knowledge of the most critical risks and improve control over them.

Another contribution is at the methodology level, since our interviews make it possible for us to further understand what factors influenced the perception of some risks by asking more questions to evaluators. In general, our research will add value to the field of risk management and especially to literature on risk perception and factors influencing it. Also, we contribute to the relationship between risk perception and decision making in SMEs.

As a managerial significance and contribution, this study shows that risk assessment, as a subjective process (Bran and Vaidis, 2020), is a difficult exercise and suggests that it should not be entrusted to a single person or to only the owner-manager of a SME, given the subjectivity of each assessor and the different factors influencing the perception of risks discussed above. The accumulation of experience, knowledge and expertise can favor a more complete assessment of future risks and thus improve decision-making. However, experience can lead to overconfidence and to a situation where a manager would be less aware of risks related to a project and manage them inadequately. Thus, as practical implication, the owner-manager of a SME are invited to include other managers with different characteristics and experiences in the process of risk management related to risky projects and decisions to favor a better assessment and control of these risks.

Although the results of this study shed light on the factors that can influence the perception of the risks of outsourcing to China, some limitations related to the scope of our findings should be mentioned. First, as with all multiple case studies, the results obtained from five Canadian manufacturing companies cannot be generalized. In addition, the knowledge of the profile of each respondent could have been enriched by additional information on their personal situation (income, wealth and experience with risky situations in the past) together with their professional background. These factors might influence their attitude toward risk and the assessments they made in the study context.

In order to confirm the significance of our results, it would be useful to survey a significant sample of SMEs that have adopted strategies to outsource production internationally or other risky internationalization strategies, such as exporting or directly investing in emergent countries. This would add statistical validity and generalizability to our results. Further, it would be important to conduct longitudinal studies on risk perception by collecting data at different points in time during a strategic project in order to see how individuals adjust their evaluation as the project data evolves. In addition, a Delphi study could be conducted to explore how knowledge of other executives' assessments could change individuals' perception of the criticality of a risk.

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Appendix

Table V: List of risks rate by each respondent according to occurrence (O) and impact (I)

	Ceka				Delta				Eska				Fada				Gamma			
	C1		C2		D1		D2		E1		E2		F1		F2		G1		G2	
	O	I	O	I	O	I	O	I	O	I	O	I	O	I	O	I	O	I	O	I
Political aspects [Risks assessed by only one respondent: (1) Possible difficulties at the subcontractor and its increase in production prices due to employee demands and unionization; (2) Safety issues]																				
Changes to laws that increase employee wages and benefits			4	3	3	4														
Changes to environmental regulations																			4	3
Strikes, demonstrations and employee demands	4	5																		
Unexpected, sometime rapid changes in government laws and policies																	5	5	4	3
Economic aspects																				
Increase in the price of the raw materials	3	3			5	4			1	2	5	5	4	4	5	3	5	5	5	4
Significant inflation in the country and increase in the price of materials needed for production					5	4														
Subcontractor experiences financial problems due to economic aspects					3	2			2	4	5	5			4	4	2	3	3	1
Subcontractor wants to increase production prices due to economic aspects			4	2	5	4	5	5	2	2	2	5					5	4		
Legal and judicial aspects																				
Slow and complex administrative procedures and different laws					3	3											4	5		
Difficulty with legal recourse and inappropriate conflict resolution																	4	4	5	2
Intellectual property infringement	3	3	4	4	4	4			2	2	5	5	3	4	5	3	4	4	5	2
Breach of contracts or agreements	3	5	2	3	3	4			4	4	4	5	3	4	2	3	3	3	5	3
Cultural and social aspects [Risks assessed by only one respondent: (1) Different work methods; (2) Different perception of quality; (3) Possibility that Chinese partners say yes without meaning it; (4) Subcontractor focuses short-term rather than long-term; (5) Subcontractor more focused on cost than quality]																				
Difficulties in applying certain management and quality control practices	3	4	4	4	5	4			3	4	3	2	3	3	4	4	4	3	4	1
Communication difficulties caused by language or differences in English accent					4	4													5	3
Chinese subcontractor misunderstands the technical and design requirements											5	3			3	3	4	4	5	4
Misunderstanding and communication difficulties	4	5	5	4	4	4			3	4	3	5	2	3	1	1	5	4	4	1

Logistical aspects and reduced control over operations [Risks assessed by only one respondent: (1) Difficulties in replacing defective products and in shipping them back to China for modification; (2) Difficulties in monitoring and transmitting good management and quality control practices; (3) Possibility of not knowing if there is a production problem in China; (4) Delayed delivery of goods due to consolidation]

Difficulties in managing inventory and increasing storage time	5	5	3	3	5	4	1	1					2	4	3	3	3	2	5	4
Production challenges and disruptions in Canada (including possible rework)	1	3			3	3			3	3	5	4	2	4			3	3		
Decrease in the quality of products manufactured in China and delivery of defective and non-compliant products	4	5	2	3	2	4	1	4	3	4	5	3	4	4	4	5	4	4	4	4
Product packaging does not meet expectations																				
The integrity of products transported does not meet expectations	2	2															3	2		
Possible increase in transportation costs			1	2	4	4			3	3	1	1					4	4	5	4
Production time overruns by the Chinese (e.g. due to quality issues or late delivery of raw materials)	4	5	4	4	3	4	1	2	3	2	4	4	2	4	4	5	4	3	4	3
Delays caused by slow administrative procedures in China																	3	3		
Delays caused by weather conditions																				
Transportation delays due to strikes in Canada and delays at the Port of Vancouver	3	4													3	4	3	3		
Transportation delays in general	4	4	2	4	4	4	2	1	2	2	3	3	3	4	4	4	3	3	4	4
Delivery time overruns in general									3	3	5	3			4	5	4	3	5	3
Financial aspects																				
Difficulties during the prospecting and selection phase																		3	3	
Insufficient on-site monitoring in China and difficulties making the trips required for monitoring									1	3										
Production disruptions and delivery delays	2	2			5	5					2	5			1	4	4	3	1	1