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DOCTORAL DISSERTATION

THE ROLE OF MANAGERIAL COGNITIVE REASONING ON THE
INTERNATIONALIZATION DECISION-MAKING OF
SMALL VENTURES

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DECLARES that in the present work, entitled “The role of managerial cognitive reasoning on the internationalization decision-making of small ventures”, to obtain the title of Doctor, no thesis chapter is an exact transcription of a previous publication.

Vigo, May 7, 2018.

The PhD student,

Božidar Vlačić,

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"Thoughts without content are empty, intuitions without concepts are blind... The understanding can intuit nothing, the senses can think nothing. Only through their union can knowledge arise."

- Immanuel Kant

The process of writing acknowledgment and expressing gratitude toward people who made this beginning of my academic rising possible consists of feeling and emotions full of the relived memories. I will intend to mention all people that guided, help or in any way provided support my PhD journey. As Mark Twain once said, "I would have written a short letter, but I didn't have the time." in this light I will try to acknowledge dear friends, colleagues, family, and mentor toward whom I am eternally grateful.

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ABSTRACT

ABSTRACT

This doctoral thesis synthesizes decision making theory, internationalization theory and managerial cognitive approaches to provide further explanation of heterogeneous internationalization patterns of small ventures (SV's).

This research has used a structural equation model in the first stage and a grounding theory approach in the second stage to assess the relationship between the components of managerial cognitive reasoning (CR, hereafter) (Experiential and Rational) as explanatory variables of the internationalization intentions and process of the decision making –perception, options, evaluation, choice-. First part of this model has been tested in a representative sample of 134 “future entrepreneurs” namely University students under extreme conditions while the second part of the model has been tested on international SVs in the context of the managerial cognitive reasoning influence on internationalization decision-making process (IDMP, hereafter). The consideration of individual-level cognitive aspects and role of cognition from the field on neuroeconomics as an element of the internationalization decision-making process is an original aspect of this research.

Chapter one summarises the research problem, the interest of research topics and the research objectives. It is included the justification that encourages research and interest in the intersection of cognitive reasoning, decision-making theory and internationalization process theory, from the empirical point of view for academic and practitioners’ implications.

Considering the research problem, chapter two comprises the relevant findings from the literature regarding the CR supplement to the IDMP as a framework for this research. It is included a literature review of the research topics, following a model of a systematic review of relevant literature. The literature review has been divided into three subsections: (a) A review of the typology of internationalization process, with attention to managerial decision-making importance; (b) A review of the main components of a cognitive system theory in terms of decision making; (c) Finally, the application of the Dual-Process theory to SV’s IDMP, followed by conclusions for the research aim.

Chapter three concrete the scope of the CR on the first stage of IDMP specifically internationalization intentions. There, the model and hypotheses

to be tested are introduced. The proposed indicators for each element of Cognitive Systems (System X - Experiential; System C - Rational) and for measuring internationalization intentions among "future entrepreneurs" are also detailed. Following the importance of IDMP under the interactive effect of the two-cognitive reasoning, namely experiential and rational while making decisions regarding speed, scope, and breath of internationalization.

The empirical test of the model is included in Chapter four, to further investigate the importance of CR among "future entrepreneurs" international intentions. In the second subsection of this chapter is outlined a qualitative approach to further investigate the importance of cognitive reasoning among the small venture managers regarding the internationalization process through the Dual-Process theory. The methodological procedure leads to the next chapter, for building the final specification of the structural equation system and grounding approach to the finally proposed internationalization decision-making framework.

In Chapter Five is detailed step-by-step statistical tests performed, including a discussion of results obtained in the process internationalization regarding the cognitive predominance among SV's managers. It also includes the results for the contrast of the six hypotheses tested.

The main challenges faced in the heterogeneous internationalization topic were the intersections between both modes of cognitive reasoning, as well as the need for bringing out the linkages between the components of the neuroeconomics to internationalization decision making framework. From the micro level of how the behavior of the individual could explain the heterogeneous SV's internationalization behavior. Derived from the results, one could argue that the CR plays a significant role in SV's IDMP are embedded in the inborn managerial structure, the importance of environment, perceived social norms and levels of behavioral contours. In the SV's, the interrelationships between components of the CR seem to have a notable role in explaining its IDMP.

Concerning the theory of CR and IDMP, the existence of some remarkable relations between their components to explain the heterogeneous behavior of SV's are highlighted. In view of accepted and not accepted hypotheses, it seems that the starting point is the CR predominance among managers to create initial internationalization intention which later leads toward the how's and whys to perform internationalization. There is not enough evidence to support the hypothesis that CR is directly related to the

internationalization intention, if not through perceived behavioral control (PBC) (primarily), perceived social norms (PSN) and attitude toward the behavior (ATB) (lesser extent) adopted from Ajzen (1991) Theory of Planned Behavior. Furthermore, there is evidence that CR plays a notable role in the internationalization opportunity perception, creation of battery of options, evaluation of selected option and making the final choice.

In Chapter Six implications from conducted studies are detailed and elevated to overall implications for theory as well the practitioners. Namely, the process of internationalization decision-making parallels the psychological process: managers are to recognize what the strategic problem is to generate a battery of options and choose the one that yields higher satisfactory levels of expected results. The importance of cognitive reasoning as an enhancement for internationalization decision-making under circumstances of elevated uncertainty and low supportive environment provides evidence of cognitive importance for positioning managerial cognitive reasoning as an antecedent of internationalization decision-making framework. Furthermore, since internationalization is a key aspect for SV's survival, and there are observed lack of intentionality to internationalize under high uncertainty and risk perception, decision-makers are supposed to develop the capability of learning and adopting expertise during the process of internationalization through the trial and error approach in order to pursue internationalization.

Chapter Seven provides the final conclusion obtained through the empirical studies as well the notable limitations and promising research avenues. It is noted that the decision-maker cognitive reasoning intervenes in case that perception of markets validity is different between the host and domestic markets. The individual's interpretation of environmental differences in terms of ability to maintain the international behavior chosen under control based on the knowledge available *ex-ante*. The overall level of perceived control plays a role in internationalization process and fostered by decision-maker cognitive predominance guides the internationalization acceleration.

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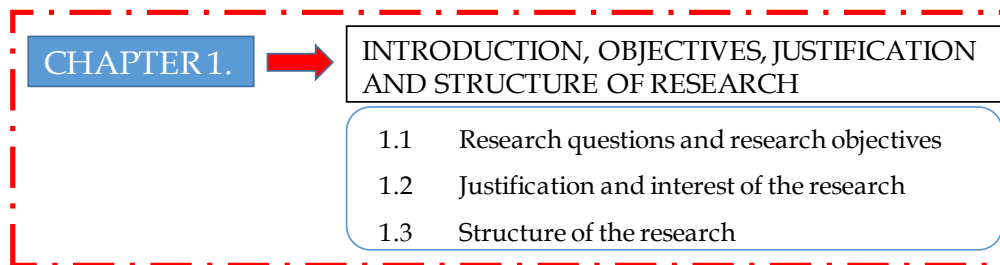
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CHAPTER 1
INTRODUCTION: OBJECTIVES,
JUSTIFICATION AND STRUCTURE
OF THE RESEARCH

RESEARCH SCOPE THE ROLE OF MANAGERIAL COGNITIVE REASONING ON THE INTERNATIONALIZATION DECISION-MAKING OF SMALL VENTURES



CHAPTER 2. LITERATURE BACKGROUND: COGNITIVE REASONING SUPPLEMENT TO THE PROCESS OF INTERNATIONALIZATION

CHAPTER 3. PROBLEM, HYPOTHESES AND INVESTIGATION MODEL

CHAPTER 4. METHODOLOGY FOR THE EMPIRICAL CONTRAST

CHAPTER 5. RESULTS OF THE EMPIRICAL CONTRAST

CHAPTER 6. DISCUSSION OF THE RESULTS

CHAPTER 7. CONCLUSION

CHAPTER 1. INTRODUCTION: OBJECTIVES, JUSTIFICATION AND STRUCTURE OF THE RESEARCH

1.1. RESEARCH QUESTION AND OBJECTIVES

Market stressors such as globalization continue to accelerate the environmental velocity in virtually every industry (Paul et al., 2017; Knight and Liesch, 2016). Small ventures (SV's) managers are increasingly facing pressures to go international quickly after the SV's inception in order to survive (Puig et al., 2014). Under these circumstances process of internationalization, decision-making is affected by additional complexity, risk and overwhelming uncertainty due to the limited amount of time available. Taking into consideration current international market conditions, it does not surprise the fact that the ultimate explanation for the observed heterogeneity in the internationalization pattern of SVs going international remains unveiled. The origin of heterogeneity and survival strategies lies in managerial reasoning and behavioral approach (Nielsen and Nielsen, 2011). According to normative internationalization theory, decisions are based on transaction costs (risks of opportunism) and of potential learning (opportunities for knowledge creation), and partly based on conditions in the target (foreign) market as well the match between the firm's domestic capabilities and the needs in the target market. Within the variety of internationalization patterns at hand, some managers choose to depart from normative internationalization theories to reach a final decision (Francioni et al., 2015), while others do not. Behavioral theorists noted that market stressors are perceived differently by individuals and therefore the interpretations of stressors and variety of internationalization patterns are dependent on managerial characteristics (Cyert and March, 1963; Maitland and Sammartino, 2015a).

The internationalization pattern, once established, is difficult to change and it often means the difference between firm's success and failure. The internationalization process school offers the Uppsala model (U-Model) as the most salient theory. As the cornerstone of Uppsala theory lies in the

experiential learning and it considers that liabilities of foreignness, of outsidership, cultural and psychic distance between the country of origin and host country, and the binomial market uncertainty-knowledge of the market will jointly determine the choice of gradual commitment with international markets (Johanson and Vahlne, 1977; 2009). Challenging the gradual and sequential approach, and even the idea that a firm will follow a process, various theories have tried to explain why some ventures seek to engage and remain in highly committed modes since the very early inception, labelled as international new ventures (INVs) and Born Globals (BG) patterns (Oviatt and McDougall, 1994; 1999; Madsen and Servais, 1997; Rialp et al., 2005). In these cases, the main determinant seems to be the industry velocity –essentially investigated in high-tech industries or knowledge-intensive services (KIS) according to Rialp and colleagues’ review (2005) of early internationalization-. This approach has put the focus on the entrepreneur-manager experience in international markets that speed up the process and even enable the venture to seize on the international market without first exploiting the domestic market. From international entrepreneurship approach, Rialp et al.’s (2005) found that most of the theoretical explanations for this behavior have relied heavily on the interaction between the entrepreneur/founder’s characteristics and the environment.

A unique resource of competitive advantage, that cannot be changed rapidly, although is influenced by globalization effects is managerial behavior (Kozhevnikov, 2007). In SVs, the manager-owner is the key decision-maker and is the one and only who plays a role on explaining the internationalization decision-making process (IDMP), which directs behavior and increases persistence with a course of action (Hambrick and Mason, 1984; Acedo and Jones, 2007). However, the missing characteristic in all the streams is the decision-maker’s cognitive role in the IDMP. In an organizational setting, cognition is defined as the way entrepreneurs-managers approach the understanding of decisions in organizational settings (Mitchell et al., 2002). In entrepreneurship, literature cognition refers to how individuals perceive the environment in such a way that some will recognize, perceive a business opportunity, evaluate alternatives and, finally, decide to start a venture (Forbes, 1999; Grégoire et al., 2011; Baldacchino et al., 2015).

In order to supplement internationalization heterogeneous behavioral underpinnings, the addition of the Dual-Process Theory explains the

individual's cognition to process information and reach a decision. This theory posits that two-distinct cognitive reasoning act when deciding. Following perception, System-X (experiential) provides automatic, unconscious, effortless, and immediate responses, while System-C (rational) intervenes by reasoning and analysing the stimuli to reach a conscious and deliberative conclusion (Epstein, 1994; Kahneman and Frederick, 2002; Strack and Deutsch, 2004; Healey and Hodgkinson, 2014). Decision makers with a natural tendency to use the experiential cognitive process of System-X, are strongly dominated by their learned expertise and are able to use it automatically to detect new business opportunities (i.e., intuitive expertise) (Sadler-Smith, 2016). They perceive more opportunities and are able to act quicker under complex circumstances with high uncertainty, comparing to decision makers that rely heavily on System-C (Kickul et al., 2009; Chaston and Sadler-Smith, 2012). Meanwhile, features of System-C are more calculated and logical which call to spend more time in investigation and very often to procrastinate the decision. Managerial cognition will help to explain how individuals perceive, evaluate and make final strategic decisions by modelling the organization accordingly (Gallén, 1997).

In this dissertation is argued that the inclusion of the Dual-Process Theory along with will increase understanding of the heterogeneous patterns of internationalization observed. First, I will provide arguments that managerial cognition plays a role and affects the relationship between the perception of the host-country environment, and the decisions the SV's make. Second, I will further elaborate to what extent the cognition affects the internationalization intentions and finally, I will provide the overall model of how internationalization decision-making process can be further enhanced.

Encouraged by the increasing concerns, the object of this dissertation is to look closer at the importance of manager-owner cognitive characteristics and its impact on the SVs' international behavior. Bearing in mind the increasing critique of the international business heterogeneous decision-making void, this dissertation is guided by the overall research questions:

How does the managerial cognitive reasoning affect the internationalization intentions?

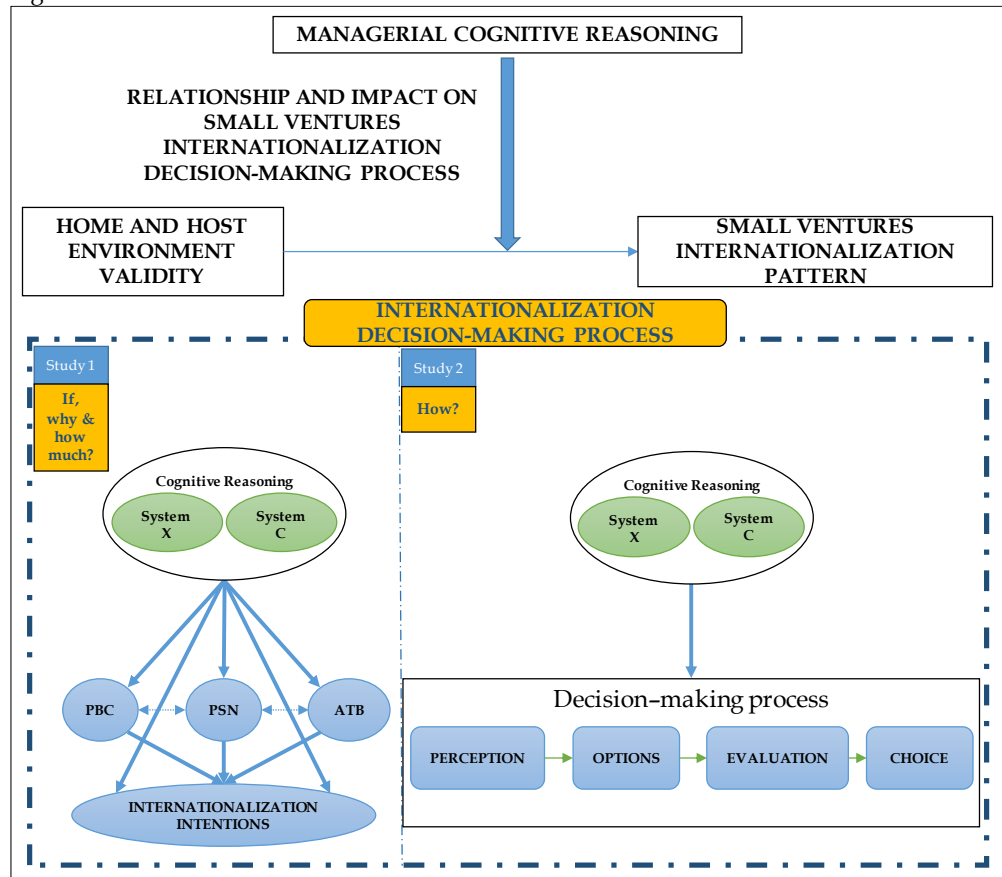
How do the managers' mental, cognitive systems affect the decision to internationalize?

Does managerial cognitive reasoning affect the results of the SV's internationalization decision-making process?

Could this approach be fruitfully included in extant theories to explain all the internationalization patterns observed?

To address the objective, this PhD study consists of two joint parts aiming to develop IDMP framework which will enhance the ultimate explanation for SV's heterogeneous international behavior (see Figure 1).

Figure 1: Scheme of items to be addressed in this research



Source: own draft

The primary objective of this dissertation is to test whether and to what extent the managerial' cognitive systems model intentions when it comes to starting an international new venture. The comparison of results with extant investigations on entrepreneurial intention among university students yields further evidence on the extent to which cognition matters when speaking about IEI under conditions of extreme uncertainty and lack of experiential internationalization knowledge. Taking into consideration the extent of individual's cognitive reasoning influence on the managerial intention toward international activity and internationalization decision-making process. This thesis starts by justifying the importance of internationalization intention and the role in IDMP.

The intentional models demonstrate an extremely high explanatory power of starting a new venture because a clear majority of SVs manager-owners decided to start a business long ago before scanning for business opportunities (Krueger et al., 2000). The intention is the cognitive state that precedes the action (Ajzen, 1991; Krueger, 2003) hence this approach can deliver fruitful results.

Following research objective, to extend the research to manager-owner of already international SVs the second study is conducted among six manager-owners to develop an ultimate framework that could enhance the role of the managerial cognitive reasoning on IDMP.

1.2. JUSTIFICATION AND INTEREST OF THE RESEARCH

Despite the extensive research, international business scholars have barely examined why and how is that firms follow disparate internationalization patterns within seemingly similar environments and industry velocity. According to Upper Echelon theory, the SV's mirrors the individual's behavior (Hambrick and Mason, 1984). Furthermore, building upon that premise Maitland and Sammartino (2015a) argued that the ultimate cause of that heterogeneity must be the managers since the rest of features under study are quite similar (country, industry, size...) even in multinationals. However, in order to enhance the behavioral mechanisms, we should first understand how the process occurs in SV's before its exploration

in more complex organizations (i.e. small-medium and multinational enterprises) in which decisions are made by teams (Healey et al., 2015). This is why the focus of this dissertation is a simpler individual-level case: the decision-making and subsequent internationalization choices of SVs.

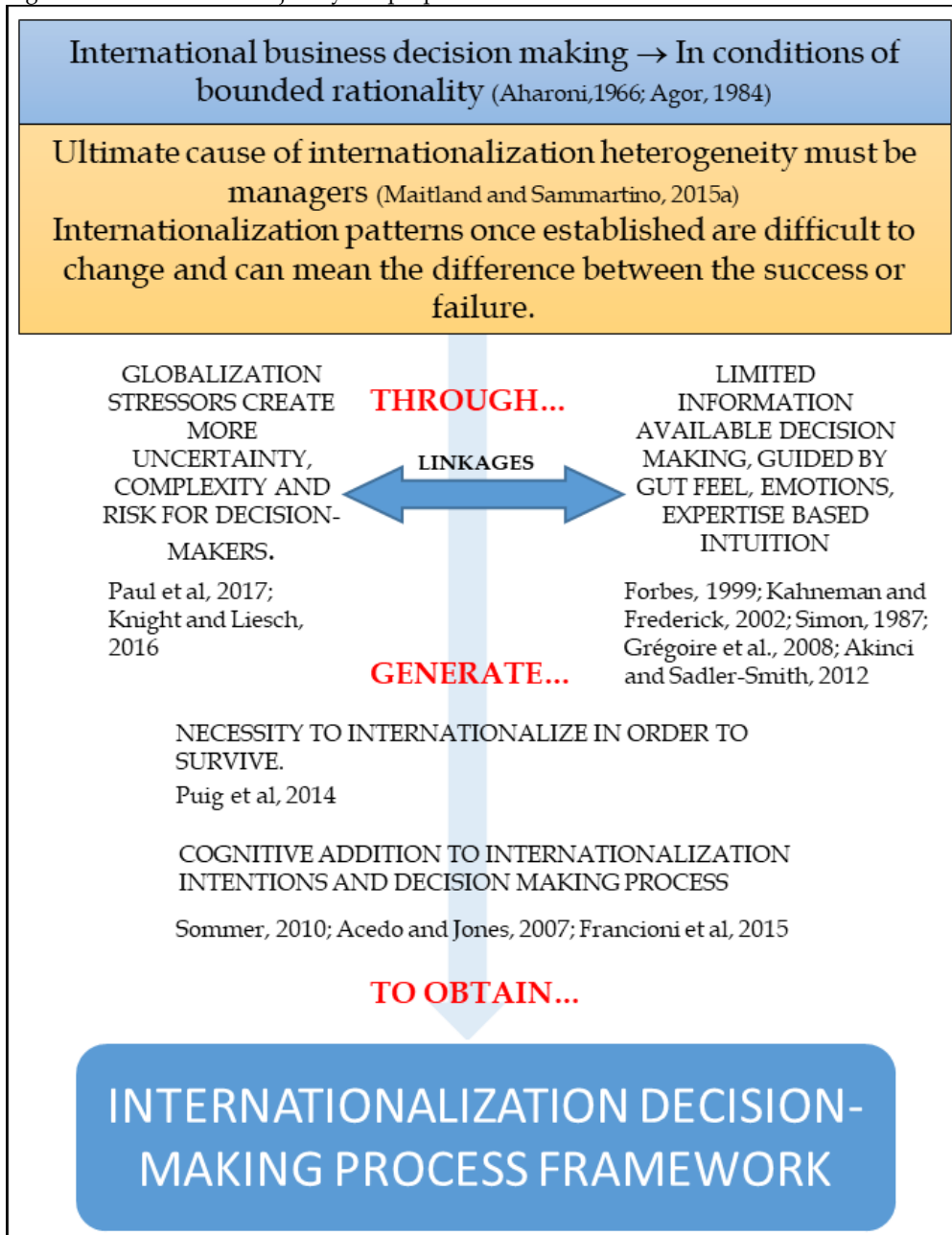
Starting from the groundbreaking work of Aharoni (1966), until the up to date finding of Jiang and colleagues (2018), the managerial cognition became positioned as a possible explanatory mechanism for diversified foreign direct investments and heterogeneous internationalization decisions. The current theory of how individuals process information claim that decision is reached by the intervention of two systems, namely System-X and System-C, in the so-called the Dual-Process Theory (Kozhevnikov, 2007; Kahneman, 2003; Evans and Stanovich, 2013). The classification of individuals in cognitive systems entails a loss of relevant information and may not represent exactly the true impact of cognition on SVs internationalization behavior. Although Kozhevnikov (2007) found that cognitive reasoning is relatively stable over time (emphasis added) in the review of that concept within psychology studies, which is in line with Hodgkinson and Clarke's (2007) definition of enduring overarching preferences in information processing approaches. The implicit lack of perpetual stability is because, in the medium to long-term, contextual issues such as education, work experience, or personal needs may model its change. Thus, the environment shapes the manager's cognition and cognition affects the manager's decisions (Simon and Houghton, 2002; Brigham et al., 2007; Hmieleski and Corbett, 2008). However, scholars tend to classify individuals into a discrete number of cognitive systems. For the purpose of this dissertation, I am taking into consideration the findings of Philips et al. (2016) meta-analysis that positioned cognitive reasoning as context and task-dependent, which shed the light that cognitive classification approach may yield inaccurate results.

Although this topic has increasingly attracted the scholars' and practitioners' attention alike in field of entrepreneurship, because what distinguishes successful entrepreneurs is the way they process information in certain situations (Baron, 1998), instead of former approaches based on finding a common stable entrepreneurial personality across countries and contexts (Krueger, 2003; Baron and Ward, 2004). The cognitive definition in the field of entrepreneurship commonly includes knowledge structures and mental maps, i.e. how and why some decide to start and grow a business while others do

not (Mitchell et al., 2002; Mitchell et al., 2002b). Amongst the international business literature, cognitive systems started to attract academics' attention to explain international entrepreneurship intentions (e.g. Sommer, 2010; Sommer and Haug, 2011). To the best of my knowledge, only Sadler-Smith (2016) theoretically developed a framework supported by that Theory to supplement the explanation of how cognitive factors affect each stage of the entrepreneurial attempt. However, there is an absence of framework in international business literature caused by the difference in levels of uncertainty, complexity and overall risk that is increased in an international environment.

This doctoral thesis attempts to provide evidence to a number of issues highlighted by recent literature reviews on the topic of managerial cognition (Forbes, 1999; Kahneman and Frederick, 2002; Simon, 1987; Grégoire et al., 2008; Akinci and Sadler-Smith, 2012), its intersection with international business (Maitland and Sammartino, 2015a) and decision-making theory (Francioni et al., 2015; Laureiro-Martínez and Brusoni, 2018). These authors among others suggested to investigate the extent to which the individuals' cognition influence the reliance on the criteria for starting an international venture and process of decision making in sequent stages of internationalization, or, conversely, whether it is the one's perception of plays a role in representation of the environmental characteristics (e.g. social referents) and what influences these criteria (see Figure 2).

Figure 2: Foundations that justify the proposed research



Source: own draft

It is also noted the relevance of the research questions arisen, both each of them separately as the combination of all. As an empirical justification of such relevance, it was undertaken an analysis of the relevant literature about related research topics in the last ten years (see the detailed output at the

beginning of Chapter 2). The main topics were “managerial cognition”, “internationalization process” and “small ventures”. To summarise (see Table 1), it can be stated that the research addressed has a novel and growing interest approach.

Table 1: Number of papers with the main topic research from 2007 until 2018

TOPICS/YEARS	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
Internationalization process	35	32	54	35	67	73	52	75	67	71	65	28	654
Managerial cognition	45	35	55	55	83	74	82	64	108	101	113	39	854
Managerial cognition AND Internationalization process	2	0	0	0	0	2	2	0	1	0	0	1	8
Managerial cognition AND Internationalization AND Small Ventures	0	0	0	0	0	0	0	0	0	0	0	0	0

Source: own draft from data of ISI Web of Knowledge (query updated on April 19th, 2018) search restricted to business and management areas

The dispersion of information among decision makers and manner by which they perceive information has fundamental implications for further development of this thesis. Because of the dispersion and disequilibrium of information, it is the managerial perception that leads toward the decision of why, how and when to internationalize. Managers-owners of SV’s make decisions based on hunches, intuition, heuristics, and accurate and inaccurate information, causing their decisions to be inconsistent and sometimes incorrect. Since decisions are not always correct, this process leads to "errors" that create shortages, surpluses, and misallocated resources. Cognitive theories are a promising approach to explaining individuals’ decision-making (Akinci and Sadler-Smith, 2012). These theories focus on human information processing rather than rational models of decision-making, thus increasing our understanding of information-processing modes involved in the decision-making process. These different modes are affected by cognitive systems.

The Dual-Process theory posits that two-distinct cognitive reasoning intervenes when deciding, precluded by the intention and perception of external stimuli. The experiential reasoning is automatic and unconscious, and

it yields default, immediate, emotional responses. Rational reasoning intervenes by analysing the stimuli to reach a deliberative conclusion, which requires intensive use of cognitive resources (Healey and Hodgkinson, 2014; Evans and Stanovich, 2013; Evans, 2008). Managers with a natural tendency to use and trust their experiential reasoning tend to be strongly dominated by their skilled expertise, labelled as expertise-based intuition in business (Akinci and Sadler-Smith, 2012). The necessary condition for the development of this skilled intuition is the high validity of the environment, which should include adequate opportunities and clear clues for learning (prolonged practice and unambiguous feedback that is both rapid and unequivocal) (Kahneman and Frederick, 2002; Kahneman and Klein, 2009). Features of rational reasoning often lead decision-makers to "analysis paralysis", which calls to spend increasing time in additional investigations. Frequently, this may lead to slow down the internationalization process due to a risk-avoidance behavior: rational reasoning leads individuals to an overestimation of risks when deciding under clear rules that are difficult to change. Therefore, many SVs lacking experience first exploits the domestic market and then think of going international after reaching enough experience domestically as to perceive lower levels of foreign market risks. This postponement follows the logic of the gradual internationalization process of the Uppsala model (Johanson and Vahlne, 1977; 2009). On the other hand, the choice of going international at or close to inception without exploiting the domestic market corresponds to the logic of INVs (Oviatt and McDougall, 1994; 1999). After an early entry in international markets, these latter ventures frequently follow a quick internationalization process (Rialp et al., 2005), due to the founders-managers' increased levels of entrepreneurial orientation. Yet some authors also claim that increased levels of speed of internationalization can also be explained in the framework of the U-Model (Chetty et al., 2014): increased levels of learning help accelerate the gradual process. To reconcile both approaches, in this dissertation I will present further evidence that the choice of an accelerated or slower pattern of internationalization can partly be explained by the managerial cognitive reasoning the observed heterogeneity of patterns of internationalization is the result of how the manager's cognitive systems filtrate environmental cues, which is a function of how s/he combines his/her cognitive reasoning to yield a strategic final choice.

To tackle these issues, this doctoral thesis synthesises decision-making theory (Mintzberg et al., 1976), internationalization and international entrepreneurship theories (Johanson and Vahlne, 1977; Oviatt and McDougall

1994; 2005; and managerial cognition approaches (Zahra et al., 2005; Acedo and Jones, 2006; Maitland and Sammartino, 2015a) in order to explain SV's choice among a variety of discrete patterns of internationalization, ranging from the traditional, sequential and gradual approach to internationalization (U-Model) to non-gradualist approaches such as INV and BG.

1.3. STRUCTURE OF THE RESEARCH

The research is structured into seven chapters to achieve the proposed objectives of the research (see Figure 3). The references consulted that have been the foundations for this research are also included, as well as other relevant information for the research.

The first section comprises the three initial chapters, containing the justification and theoretical part of the research.

- In the current **chapter one**, it is summarised the research problem, the interest of research topics and the objectives to be achieved. It is included in the justification that motives this research and its interest from the theories of “Cognitive Reasoning”, “Decision-Making theory” and “Internationalization process theory”.
- **Chapter two**, it is addressed the state of the art of internationalization process theory as the framework of this research and cognitive reasoning items that are more closely related to research objectives.
 - A literature review on internationalization process is consisted of the typology of internationalization decision-making, with particular attention to managerial cognitive features.
 - A literature review on application of cognitive systems as an antecedent of international entrepreneurship intentions through the prism of Ajzen (1991) Theory of Planned Behavior. A review of conceptual

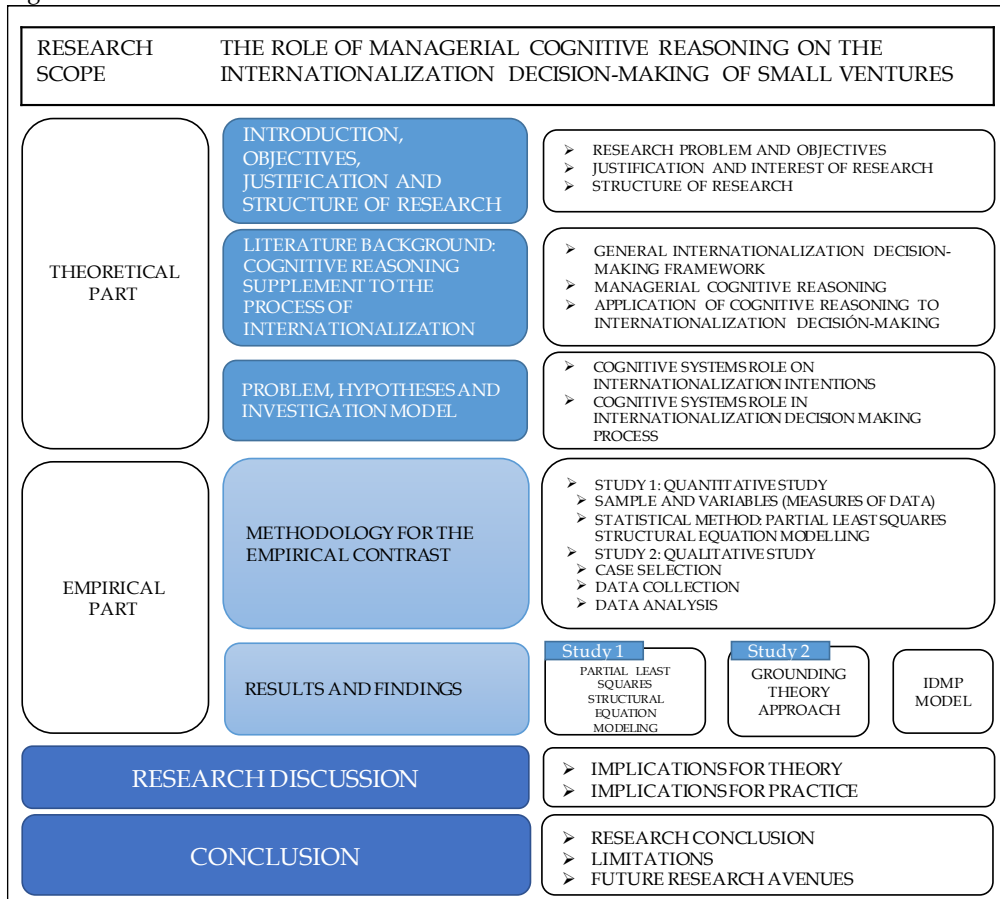
aspects about definitions and components of the International Entrepreneurship intentions. Finally, the relevant findings of such topic for this research, where it is included a brief review of researchers linking cognitive reasoning with internationalization decision making the performance as key elements.

- **Chapter three** concretizes and demarcates the research problem. There, the model and hypotheses to be tested are introduced. Proposed indicators for the measurement of each component of cognitive systems (System X and System C) are also detailed, as well as for measuring the influence of cognitive systems on internationalization intentions through the Theory of Planned behavior framework for the first study. Regarding the second study, the managerial cognitive reasoning role on IDMP –perception, options, evaluation, the choice is elaborated in detail.

An empirical test of the model comprises two chapters:

- **Chapter four** includes the methodology to be employed in the empirical test. Methodological tools are justified for the proposed research. The process for collecting primary information is detailed, as well as the results of both processes is included. The last section of this chapter outlines the statistical procedure to be used in the next chapter for testing factor components, the scales of measurement and the causal model of structural equations. Furthermore, the grounding theory approach to providing an enhanced framework that could explain heterogeneous internationalization behavior of SV's.
- **Chapter five** details step-by-step statistical test performed for both studies, introducing the results obtained in the process of specifying and confirming the final framework. The outcomes of the six hypotheses contrasted are also included.

Figure 3: Structure of the research



Source: own draft

- **Chapter six** comprises the findings and the discussion from the research developed:
 - Overall implications for the theoretical perspective positioned at the intersection of Study 1 and Study 2.
 - The implication from the empirical perspective, for practitioners and business management decision-makers.

- **Chapter seven** introduce the final conclusions. It has been structured in:
 - Limitations of the research include those nuances that could somehow limit the interpretation of results. It also included some considerations for researchers trying to address similar issues.

 - Future research lines, both from short-term and medium and long-term. The latter for trying to broaden the findings and achieve more widespread conclusions. The former for trying to minimize and address some of the limitations found.

The bibliography is included in a final section, containing the references used as a baseline of this research.

The appendix included are divided into two parts according to the empirical studies conducted. The first annex contains the questionnaire employed for the first study. The second annex is the questionnaire conducted the empirical test for grounding IDMP framework.

**CHAPTER 2: LITERATURE
BACKGROUND: COGNITIVE
REASONING SUPPLEMENT TO THE
PROCESS OF
INTERNATIONALIZATION**

RESEARCH SCOPE	THE ROLE OF MANAGERIAL COGNITIVE REASONING ON THE INTERNATIONALIZATION DECISION-MAKING OF SMALL VENTURES
CHAPTER 1.	INTRODUCTION, OBJECTIVES, JUSTIFICATION AND STRUCTURE OF RESEARCH
CHAPTER 2.	LITERATURE BACKGROUND: COGNITIVE REASONING SUPPLEMENT TO THE PROCESS OF INTERNATIONALIZATION
	<ul style="list-style-type: none">2.1 General internationalization decision-making framework2.2 Managerial cognitive reasoning<ul style="list-style-type: none">2.2.1 Cognitive reasoning supplement to managerial decision-making2.2.2 Dual-process theories of reasoning and judgement2.3 Application of cognitive reasoning to internationalization decision-making
CHAPTER 3.	PROBLEM, HYPOTHESES AND INVESTIGATION MODEL
CHAPTER 4.	METHODOLOGY FOR THE EMPIRICAL CONTRAST
CHAPTER 5.	RESULTS OF THE EMPIRICAL CONTRAST
CHAPTER 6.	DISCUSSION OF THE RESULTS
CHAPTER 7.	CONCLUSION

CHAPTER 2. LITERATURE BACKGROUND: COGNITIVE REASONING SUPPLEMENT TO THE THEORY OF INTERNATIONALIZATION

2.1. GENERAL INTERNATIONALIZATION DECISION - MAKING FRAMEWORK

Internationalization patterns once established, are very difficult to change, and it may mean the difference between firm success and prosperity or firm failure (Brouthers et al., 1996). Understanding internationalization decision-making process is essential, considering firm performance as one of the ultimate goals of internationalization process. Managers learn (and often do so) from dealing with international issues, and, therefore, see opportunities to embark on strategic choices to better position their new international ventures (Zahra et al., 2005; Zahra, 2005; Ganotakis and Love, 2012).

To date, the dominant theoretical approaches have included a variety of reasons and mechanisms to explain the international behavior of firms. Internalization of knowledge and productive means is crucial to understand why the multinational enterprise tends to expand its activity, which implies that hierarchies are needed to overcome market failures (Buckley and Casson, 1976; 2009). Internationalization theory by Johanson and Vahlne in (1977) present the pillar stone of internationalization research. The gradual commitment of resources in the international market based on knowledge-based experience, uncertainty and risk perception is at the heart of the Uppsala model (Johanson and Vahlne, 1977, 2009). Following rational decision maker approach Williamson (1975) defined entry mode decisions based on transaction cost analysis approach. The main finding of TCE approach is the rational decision maker perspectives of the most efficient market entry mode among the available internationalization options. Slightly departing from the notion of rational decision-maker the real options theory (Myers, 1977) provided from finance perspective that international strategy has been motivated by its assessing endogenous and exogenous uncertainties not only as sources of threats but also as sources of opportunities. Furthermore, Dunning's (1988) presented eclectic or OLI paradigm, in which the firm-

specific assets play key factors explaining the market entry modes decision making: ownership advantages (O), locational advantages (L), and internalization advantages (I). Agreeing with OLI approach, Rugman (1981) claimed that firm-specific advantages (FSAs) are organizational capabilities that enable an international ventures competitive advantage. Applying this reasoning with Upper echelon theory posits that in SV's main source of FSAs comes from owner/manager reasoning. Enlarging the gradual approach Johanson and Mattsson (1986) defined industrial network approach, which positioned the impact of environment and surrounding factors as additional pillar stone in internationalization theories. According to the network approach, internationalization process is about how well the firm is able to enter and interact with international networks of economic activity (e.g. Coviello and Munro, 1997; Blomstermo et al., 2004).

However, gradual theory seemed to be invalid to explain the exceptions, why certain ventures decided to commit resources with international markets at or shortly after inception, which required the intersection with entrepreneurship to find a valid explanation to the international new ventures phenomenon (Oviatt McDougall, 1994, 1999) and other similar nomenclatures of early and accelerated internationalization (Madsen and Servais, 1997; Autio et al., 2000; Zahra et al., 2000). In 1994 Oviatt and McDougall identified ventures that don't follow initially presented a pattern of gradual internationalization, these companies were named International New Ventures. These firms progress to internationalization rather rapidly. The period from domestic establishment to initial foreign market entry is often three years or less. The ability to internationalize early and succeed in foreign markets is a function of the internal capabilities of the firm (Autio et al., 2000; McDougall and Oviatt, 2000). INV's begin with a global view of their markets and develop the capabilities needed to achieve their international goals (Harveston et al., 2000; Knight and Cavusgil, 2004; Fatehi and Ghadar, 2014) The pillar of INV theory is based on age of firm when they become international and not on their size. The focus is on proactive international strategy and not on foreign direct investment since they don't depend on foreign assets. The definition of the international new venture is based on "value added, not assets owned" (Oviatt and McDougall, 1994, p.49). Afterward, Knight (1996) identified ventures that internationalize in an accelerated manner rather from inception and named them as Born Globals (BG). The main difference according to scholars when classifying the INV's and BG's is related to firm age at the moment of first entry with respect to total

assets foreign invested. These firms begin with a global view of their markets and develop the capabilities needed to achieve internationalization rather rapidly (Harveston et al., 2000; Knight and Cavusgil, 2004; Fatehi and Ghadar, 2014). According to Knight and Cavusgil (2004), a great majority of successful BG's believe in the importance of international orientation, which implies a kind of attitudinal factor. The ability to internationalize early and succeed in foreign markets represents a function of the internal capabilities of the firm (Autio et al., 2000; McDougall and Oviatt, 2000). Identifying firms that enter international markets with the more committed approach by skipping certain stages of gradual internationalization theory lead Dimitratos and colleagues (2003) to identify micro-multinationals as "*small and medium-sized firm that controls and manages value-added activities through constellation and investment modes in more than one country*".

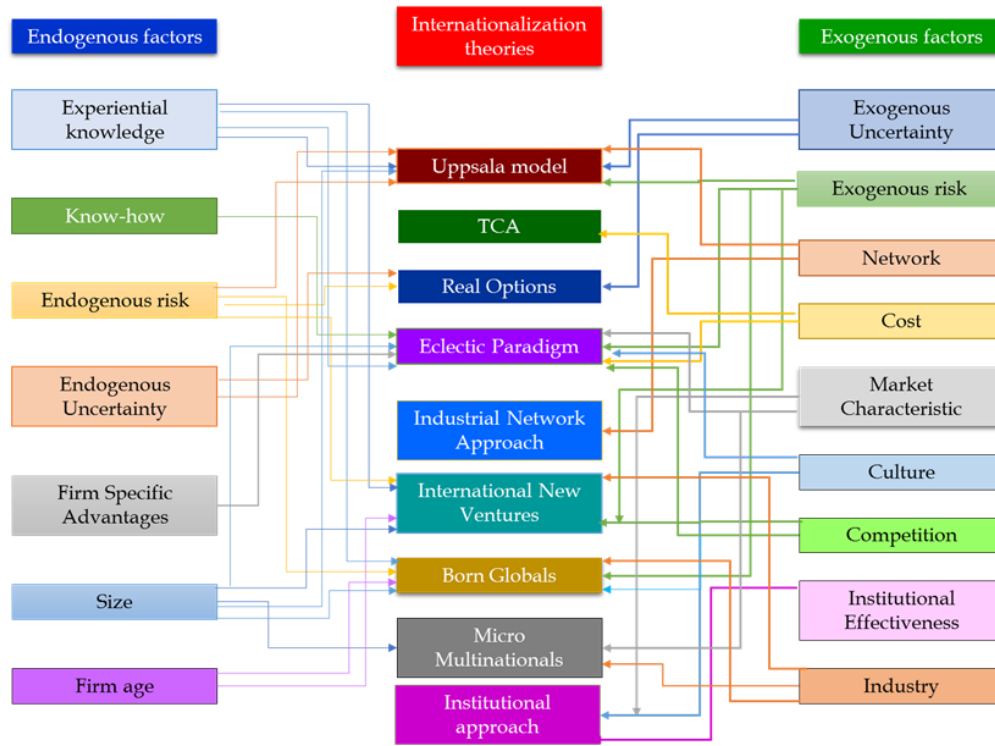
Furthermore, institutional approach posits that trade-offs between institutions and resources cause the heterogeneity in internationalization decision-making since there are no two similar countries who could offer the same institutional environment. Moreover, the institutional viewpoint posits that, in the end, the firm needs to legitimate its decisions, so a kind of agent-principal problem may arise between headquarters' and subsidiaries' managers, as well as the need to legitimate the subsidiary existence in the host country (Kostova and Zaheer, 1999).

Schema of the internationalization theory (see Figure 4) present the main factors defining the internationalization decision making approach from the organizational and individual perspective (De Villa et al., 2015).

Several literature reviews on SV's internationalization process have emphasized the notable differences relative to larger firms (Morschett et al., 2010; Laufs and Schwens, 2014; Bruneel and De Cock, 2016). First, SMEs tend to prefer cooperative, non-equity entry modes due to their constraints in resources. Accordingly, the observed patterns of internationalization a venture may follow range from the internationalization process model (essentially, the U-model) to early and/or accelerated modes such as INV and BG. Second, SV's are more sensitive to environmental changes than larger firms are which adds more pressure to the uncertainty of the decision. And third, the owner's personal values, needs, fears, and objectives are inseparable

from the decision in SVs. This decreases the number of options SVs have at hand in its first entry. Yet the issue should be how decision-maker perceives the overall uncertainty around the decision of internationalization.

Figure 4: Classification for understanding and developing internationalization research



Firm age among other factors represents a critical contextual dimension in small venture internationalization literature. The firm's age has been frequently applied as a sampling criterion in particular for those studies focusing on SMEs that internationalize early or even nearly from their inception (Laufs and Schwens, 2014). The Scandinavian "stages" model of entry suggests a step by step pattern of entry into successive foreign markets, coupled with a progressive deepening of commitment to each market. Increasing commitment dependent on experiential knowledge and risk perception of the decision maker is particularly important in the thinking of the gradual approach (Johanson and Vahlne, 1977; Johanson and Wiedersheim, 1975, Figueira de Lemos et al., 2011). Risk perception (Kraus et al, 2015), experience (Papadopoulos and Martín, 2010), location costs, internationalization factors, financial variables, cultural factors, such as trust and

psychic distance, market structure and competitive strategy, adaptation costs (to the local environment), and the cost of doing business abroad are identified in the literature as playing a role in determining firms' foreign market entry decisions (Buckley and Casson, 1998). The U-model sees internationalization processes as involving time-consuming organizational learning processes (Madsen & Servais, 1997). With the assistance of Internet as well the ease and opportunity to gather information and interact with people by developing social networks all around, there is an increase of firms that from the inception establish a global perspective. Expanded overview of internationalization theories and factors affecting the internationalization decision-making is presented in Table 2.

Table 2: Key contributions to the process of internationalization

Author(s)	Year	Description link
Johanson and Wiedersheim	1975	Firms from small domestic markets tend to follow slow gradual internationalization process. Reasons for internationalization to neighboring countries comes from lack of knowledge and uncertainty avoidance.
Buckley and Casson	1976 1998 2009	Internationalization decision maker is not completely rational when confronted with various costs caused by environment features. The mechanism explaining the advance towards more committed modes (multinationals) is the internalization of knowledge and productive resources
Johanson and Vahlne	1977	Gradual internationalization raises the importance of the use of knowledge through expected behavior based on past internationalization experience and stimuli. The high importance of past experience and organizational behavior on internationalization decision making process.
Oviatt and McDougall	1994	Competitive advantage possibilities on international market urge need for rapid internationalization affected by resource scarcity at the domestic market.
Brouthers et al.	1996	Entry mode selection of SME high-velocity firms (high technology firms) according to the firm perception of local advantages and ownership has a positive influence on entry mode commitment.
Coviello and Munro	1997	Network relations are affecting internationalization speed, mode of entry. Ease of transferring the products to foreign market in software companies is increasing internationalization speed.
Madsen and Servais	1997	Manager past experience, ambition and motivation in correlation of organization and environmental features determine success of BG internationalization.

Author(s)	Year	Description link
Oviatt and McDougall	1999	The speed of internationalization is accelerating, and companies are more dependent on international revenue. Management team represents an important factor that needs to be researched its intersection as well with other factors that are affecting internationalization decision making.
Autio et al.	2000	The age of entry is affecting the internationalization pattern. New companies are more adaptive to foreign market because of “learning advantages of newness”.
Harveston et al.	2000	Managers who are more globally oriented, risk tolerant and have a higher level of international experience are better decision makers for internationalization process
Zahra et al.	2000	INV internationalization effect on technological learning and financial performance. Managers must develop a skill that will integrate learning as firm expand internationally. Managerial preferences and attitudes are the core of firm internationalization activities
Blomstermo et al.	2004	Firms with higher domestic knowledge and late international market entry have difficulties in internationalization process due to accumulated domestic knowledge and created routines.
Knight and Cavusgil	2004	The global presence of SME is increased due to mechanisms and infrastructure that is facilitating internationalization process
Rialp et al.	2005	Venture internationalization strategy is affected by managerial entrepreneurial orientation.
Zahra	2005	The dearth of investigation on how team management features are affecting INV performance
Johanson and Vahlne	2009	Firms established relations are affecting internationalization process.
Papadopoulos and Martín	2010	International experience leads toward a higher level of internationalization. Promotion of higher level of internationalization cause higher performance in foreign markets. Public institutions should stimulate international activities.

The role of managerial cognitive reasoning on the internationalization decision-making of small ventures

Author(s)	Year	Description link
Ganotakis and Love	2012	At the beginning of internationalization process, managerial experience is playing a key role, once internationalization is established learning must occur in order to sustain competitive on the international market.
Laufs and Schwens	2014	Foreign entry market mode choice future choice should apply upper echelon theory to explain SME internationalization strategy.
Kraus et al.	2015	The risk relating to target countries is more relevant than the risk relating to market-entry modes.

2.2. MANAGERIAL COGNITIVE REASONING

2.2.1. COGNITIVE REASONING SUPPLEMENT TO MANAGERIAL DECISION- MAKING

Laureiro-Martinez and Brusoni (2018) noted that the underpinning process which is occurring while making the strategic decisions provides support for the moderating effect on the relationship between environmental stimuli and managerial decisions. Applying this reasoning to internationalization decision making process, availability of decision makers: to explore, and act upon, alternative behaviors and options available guide SV's internationalization process decision-making.

Cognition can be understood as knowledge (the stock of available information), as a process (reasoning, decision-making), and as a capability (expertise, skill). The cognitive system is a psychological construct about how individuals acquire, process, and organize internal and external information to obtain judgments to decide, or solve problems (c.f. in the integrated framework of Kozhevnikov, 2007). Cognitive systems are not simply inborn structures, dependent only on an individual's internal characteristics. They are rather interactive constructs that individuals develop in response to social, educational, professional, and other environmental requirements which are affecting overall performance (Gavetti, 2012). Empirical studies have increasingly drawn the attention to cognitive aspects as explanatory factors of the firm's decision-making process (see Table 3 for an extended overview). It has been found that a decision is reached in the complex interaction of two cognitive systems, namely System-X (or sometimes called System-1) and System-C (or System-2). In order to define immediate judgments that are mostly based on feelings, humans use System-X which is named as "intuitive", "experiential", or "impulsive" reasoning. System-C is known to be more "logical", "rational", or "reflective" (Epstein, 1994; Kahneman and Frederick, 2002; Strack and Deutsch, 2004; Evans and Stanovich, 2013; Healey and Hodgkinson, 2014).

Over the years of inquiry, intuition has become an element of reasoning (Agor, 1984). Herbert Simon (1955) was one of the first to appreciate the capacity limitations of conscious processing in decision-making. Because of the importance of the decision making as an inherent part of the managerial activity, intuition has also been investigated under the label of decision-making style. Intuition is most recently

defined by Dane and Pratt (2007) as “affectively charged judgments that arise through rapid, no conscious and holistic associations”. Intuition is most importantly rooted in what we learn from our experiences. According to Khatri and Ng (2000) intuition (i.e. skilled expertise) can be developed rapidly through repeated exposure to the complexity of real problems. Salas et al. (2010) provided the rationale for when intuition can perform its best when it comes to organizational decisions: when it is expertise-based. Intuition is then understood as rapid and affectively charged judgements influenced by the individual’s processing styles (the manager of small ventures), the decision environment (context-specific issues) (Patton,2003), and the decision task (e.g. level of complexity), which yields hints for experience-based learning (Hayashi, 2001). A different form of processing information is labelled as insight (Hodgkinson et al.), 2009), which is different to intuition: the former requires a certain time of incubation to reach a conclusion, so it can be understood as a combination of deliberative and unconscious thinking. Insight quite frequently derives in a “eureka” moment. This is labelled as pre-conscious processes that contextualize and shape deliberative reasoning and decision-making (Evans, 2008). Salas et al. (2010) also recognize that expertise-based intuition overlaps intuition, but it is different to the latter notion of process information: the former is the rapid generation of single decision options rooted in extensive domain-specific knowledge. Patterns of recognition could be easily replicable in the current context and automaticity when the manager feels familiarity with the surrounding circumstances (Louis and Sutton,1991; Sarasvathy et al., 2003). Accordingly, we should devote time to explain and understand the process of decision-making from the psychological perspective and compare it with the three-stage process of strategic management (strategic analysis, formulation, implementation-feedback).

2.2.2. DUAL-PROCESS THEORIES OF REASONING AND JUDGEMENT

The Dual Process Theory refers to the two ways of thinking taking place in the human brain when making judgements and decisions (Kahneman, 2003). One is essentially fast, non-conscious, automatic, emotionally charged, sometimes referred as System-1, System-X, Type-1 or Process-1, and it relates to the idea of the intuitive cognitive system. The other is slow, conscious, requires a considerable use of cognitive resources and working memory, and it is rule-based, which is named as System-2, System-C, Type-2 or Process-2, related to the analytic cognitive system. Evans and Stanovich (2013) reflect on the existing debate on whether there are two distinct brain areas responsible for the two ways of thinking or whether they are two different processes. The most interesting outcome of this debate arises from neuroscientific experiments, in which individuals are subjected to modern brain imaging techniques when they must make certain decisions, ranging from functional

magnetic resonance imaging-fMRI, computed tomography, electroencephalography or magnetoencephalography. Individuals display a natural tendency to rely on one System or the other (Salas et al., 2010). Even modern experiments have shown that System-X outperforms System-C when it comes to complex decisions, while System-C outperforms the former when decisions involve simpler evaluations (see deliberation without attention in Dijksterhuis et al., 2006). Thus, both cognitive systems should inform how individuals make decisions about whether to start a new business or whether it should go international short after inception.

Furthermore, from the psychological viewpoint, decision-making is a three-stage process: options identification, evaluation, and choice (Fellows, 2004). Kahneman (2003) argues that perception is the first step in the process. Cognitive System-X creates involuntary impressions of the attributes of objects (based on experiences). System-C is involved in all subsequent conscious judgments, which are explicit. He, then, argues that the analytic system is responsible for monitoring the results of perception and intuitive system. Therefore, the use of both Systems of cognitive reasoning plays an intermittent role in the decision-making process.

The linkage with entrepreneurial intention is that judgements and intentions are emotionally charged and neither the final decision can be free from potential biases stemming essentially from System-X, nor can it be separated from the normative behavior following a detailed analysis. Many behaviors are intuitive, skilled, unproblematic and successful (Kahneman, 2003). The main problem of the operationalization of cognitive research is the scholars' tendency to assimilate Dual Process Theory and dual cognitive systems. Rather than discrete, cognitive system is a continuum (Evans & Stanovich, 2013), with both systems interacting to reach a final decision. This can be better understood considering one of the Frederick's (2005) items to measure objectively intuition:

"A bat and a ball cost \$1.10 in total. The bat costs \$1 more than the ball. How much does the ball cost?"

In this example, if one is asked to answer quickly, the first impulse is the wrong answer "10cts". In that experiment, this was the answer of 50 to 56% of university students. A clear majority of the rest answered rapidly the same but unconsciously, effortlessly (System-X warning), they realized that something was wrong with the initial solution so went on to solve analytically the equation and reached the right answer "5cts". This experiment implies that, although both systems

affect human decision-making, certain individuals display a natural tendency to rely more on one than on the other; one weight differently each System depending upon the decision (task-dependency) and pressures to reach a decision. Our reasoning will be thus incomplete without the consideration of both systems.

Sadler-Smith (2016) has made one of the few attempts to include this psychological theory in the academic debate on entrepreneurial cognition. He proposes an explicit model in which intuition (linked to System-X) affects to opportunity recognition and evaluation, while System-C intervenes after them and before choosing a final option. While theoretically valid, this framework assumes that all the successful entrepreneurs would act in the same manner, while it is commonly known that some may rely more on his/her intuition or on his/her analytic system. Allinson et al. (2000) found that entrepreneurs are more intuitive than managers. Despite this, it does not mean that an analytic individual or one that is as intuitive as analytic cannot be a successful entrepreneur, but somehow System-X may emphasize some type of predisposition to behave entrepreneurially. Accordingly, studies on the cognitive side of entrepreneurs should not rely solely on the operationalization excluding the possibility of individuals to assign different weights to each cognitive system. Furthermore, Castellano et al. (2014) found that both cognitive systems are important during all the stages of the entrepreneurial process. This suggests that entrepreneurial cognition is incomplete without the intervention of both System-X and System-C. Yet it remains unknown how much each cognitive system influences entrepreneurial intentions and whether that relationship is direct or indirect through any mediating construct

Table 3: Research overview of cognitive effects on decision-making in business management

Author	Year	Description link
Agor	1984	System X in management is useful in limited and inadequate information at hand. Cognitive systems are a source of integrated solutions that are visionary and practical.
Simon	1987	An effective organization has to combine intuitive and analytic strategic decision making.
Louis and Sutton	1991	Cognitive gear switch improves decision making the performance. Conditions recognition enhance managers to improve decision making process.
Epstein	1994	System C decision making can underperform in certain complex situations compare to System X decision making.
Khatri and Ng	2000	System X decision making is widely used in the organization and has a positive outcome in an unstable environment, while negative in a stable environment.
Allinson and Hayes	2000	Cognitive style classification can overcome problems with cultural difference in managerial teams. Cognition explains organizational behavior because it is directly connected with fundamental management task of organizing and evaluating information.
Hayashi	2001	The greatest power of System X decision making is that the process can be learned and enhanced into an effective management style for quick action.
Kahneman	2003	Most behavior that is intuitive, skilled and successful, is likely to be anchored in intuitive intentions even when is not completely dominated by them.
Patton	2003	Environment circumstances affect the manager to make decisions without all important data. Combination of logic, intuition, emotions create optimal decision-making process.

Author	Year	Description link
Sarasvathy et al.	2003	Entrepreneurial opportunity recognition requires decisions and actions based often on entrepreneurial imagination and aspiration.
Fellows	2004	Decision making process in consisted of options identification, evaluation of options and decision choice.
Sadler-Smith and Shefy	2004	Intuition and rationality are two parallel systems and executives make decisions when both systems are satisfied, hard and sound! Executives with trained use of CS are able to create better decisions.
Dijksterhuis et al., 2006	2006	System C reasoning outperforms in simple choices, while System X does in complex choices.
Dane and Pratt	2007	Managers should acquire intuition as decision making tool and develop it with accordance to experience and skills developed.
Hodgkinson and Clarke	2007	Creation of managerial teams with different CS can lead towards harder task solutions and agreement acceptances.
Kozhevnikov	2007	Depending on the environment, the same individual might develop different individual CS. Such individual styles might serve as the best predictor of an individual's behavior and success in different situations.
Evans	2008	DP theory definitions. Not applicable to the current topic
Hodgkinson et al.	2009	Developing leaders for mixed teams, recognizing that teams composed of a diverse mix do not always make easy bedfellows and can be counterproductive. A mixture of CS within teams can be counterproductive while making strategic decisions.
Kahneman and Klein	2009	The environment of high validity and adequate opportunities for learning the environment are necessary conditions to develop skilled intuition.
Salas et al.	2010	CR (System X) contributes to the effectiveness of time-pressured complex decision making in the real world. System X based on experience is aiding the process of optimal solutions in limited time.

Author	Year	Description link
Hodgkinson and Healey	2011	Strategic management research should include additional cognitive styles other than just the rational thinking.
Gavetti	2012	Changing mental modes can lead to higher performance than maintaining status quo. Managers, if want to achieve cognitively distant superior strategic performance, must develop cognitive capabilities.
Evans and Stanovich	2013	Parallel dual process theory does not represent the real state of cognitive system performance. There is some evidence suggesting that both cognitive systems work in collaboration not separately.
Phillips et al.	2016	Decision process outcome depends on the decision maker and the nature of the decision task. System X is outperforming when based on experience and in time pressure while it is negatively associated with overall performance compare to System C.

2.3. APPLICATION OF COGNITIVE REASONING TO INTERNATIONALIZATION DECISION-MAKING

According to the acknowledged theories, SV's are recognized to internationalize in less foreseeable ways, often determined by serendipitous and uncontrollable events (Bruneel and De Cock, 2016), and guided by the perception of the internationalization challenges (Paul et al., 2017). Unifying characteristic for all internationalization theories is the notion that decision is made by individual decision-maker who defines the final internationalization pattern choice (Kalinic and Forza, 2012).

In SV's, the entrepreneur-manager triggers strategic decisions (Hambrick and Mason, 1984; Halikias and Panayotopoulou, 2003), which are affected by his/her perception of differences between domestic and host market conditions (Armstrong et al., 2012; Francioni et al., 2015).

The critical element in IDMP is how the main decision-maker, the entrepreneur, makes complex decisions under uncertainty conditions and limited time available regarding the combination of host market, entry mode and the organizational timing (the moment within the organization's lifespan) (Zucchella et al., 2007; Morschett et al., 2010; Maitland and Sammartino, 2015a; Schellenberg et al., (2017).

The Gavetti's (2012) view of behavioral strategy suggests that the managerial representation of business opportunities has to do with how s/he perceive and interpret environmental stimuli. According to the U-model and from the decision-maker perspective, the critical factors are how firms address the perceived environmental uncertainty and risks associated to each option, which is dependent upon the decision-maker's knowledge of the market (Johanson and Vahlne, 1977; 2009). Figueira-de-Lemos and colleagues (2011) mathematically developed the idea that uncertainty and risk are the two faces of the same coin relative to international commitment: more commitment entails increased levels of risks in the short-term with the aim of decreasing uncertainty later by gaining more profound knowledge of the host market. According to this logic, since the entrepreneur knows well the

domestic market, it offers the lowest level of environmental uncertainty and thus associated risks can be better predicted. Once the firm has exploited this market, then the international market is a must step if the firm wants to grow. This justifies the idea that the more rational choice is this gradual process. This is because of the uncertainty avoidance inherent in a rational economic.

Adopting bounded rationality approach Buckley (2016) noted in the historical review that in international business decision makers are only partly guided by rational reasoning. In IDMP complexity, uncertainty, risk and limited time available play a crucial role. As the experiential reasoning has shown to outperform the analytic reasoning when the decision involves many different attributes, while analytical reasoning, which is sequential and rule-based, is the best suit to low levels of complexity—see the experiment of Dijksterhuis et al. (2006) on deliberation without attention. Therefore, the factors in play in the decision maker's minds while making decisions help to understand critical decisions made according to the task and context of the international decision (Csaszar and Levinthal, 2016).

According to the INV theory, the manager does not always choose the lowest cost location for each activity the firm performs. This represents a departure from the logic and rational decision implicit in the U-model: since internationalization is a knowledge-based process, the less risky choice is to go international in a sequential and gradual manner. In order to avoid uncertainty conditions due to the lack of relevant knowledge about the culturally and physically distant host markets, this rational pattern tries to maximize the usage of extant knowledge in markets that the decision-maker perceives as similar contexts. However, an explanation may come from the Simon's (1955) notion of satisfactory decision instead of an optimal solution: given the relatively short life cycle of products/services of most SME companies based in IT sector that is nowadays categorized as INV, these firms find that the satisfactory level of profit may be reached only by serving multiple markets from inception (Wright et al., 2007). Finally, Kuivalainen and colleagues (2007), among others, noted that managerial attitudes represent significant indicators of internationalization decision making process.

To date extant theories of international business have provided explanations for the final outcomes of the process of internationalization decision-making at the firm level of analysis. However, managerial cognitive aspects are not enough to

present in international business research although implicitly are present (e.g. psychic distance perception, risk and uncertainty perception, etc.) and is becoming an increasing area of interest among scholars (Verbeke and Ciravegna, 2018). As a result of the review made, four critical issues arise (see Table 4): (1) the characteristics of the internationalization pattern, (2) the perception of host environment, (3) the features of decision-maker, and (4) the underlying assumption regarding the cognitive perspective of the decision-maker.

Table 4: Literature review intersection

Issues	Uppsala model ^{1,2}	International New Ventures ^{3,4,5} and Born Globals ^{6,7,8,9}
Internationalisation features	Mainly traditional manufacturing industries Stepwise gradual approach Incremental steps First exploitation of domestic market and later international markets Primary focus on close cultural markets	Mainly Hi-tech and KIS (global) industries Rapid and accelerated approach Do not necessarily follow a stepwise approach Simultaneous exploitation of both domestic and foreign markets Primary focus on the international market regardless of cultural distance (global industry)
Decision-maker's perception of the host environment 10,11,12,13,14,15,16,17,18,19,20,21,22,23	Lack of host market knowledge High host market uncertainty High liabilities of foreignness & of outsidership Incomplete information about the host market	Acceptable uncertainty Acceptable risk Forced by industry time pressure No need for complete host market information
Features of decision-maker ^{24,25,26,27,28,29,30,31,32,33,34,35,36,37,38}	Control seeker Control-based logic Stepwise High-risk aversion Avoids complex decisions Slower decision making Lack of or only marginal international experience	Risk Taker Perceives more opportunities than threats Accepts complex decisions Relies on hybrid structures (e.g. close personal relationship, joint ventures) Faster learner Possesses international experience Relies on obtained international skills prior to the birth of the firm (personal networking, international contacts, and experience from former occupation, education)
Cognitive perspective of the decision-maker ^{39,40,41,42,43,44,45,46,47,48,49,50,51,52,53}	Conscious Rational-Logical Calculated	Sometimes non-rational Intuitive expertise Guided by emotions Holistic

Notes: 1. Johanson and Vahlne (1977); 2. Johanson and Vahlne (2009); 3. Oviatt and McDougall (1994); 4. Oviatt and McDougall (1999); 5. Madsen and Servais (1997); 6. Knight and Cavusgil (2004); 7. Knight and Liesch (2016); 8. Rialp et al. (2005); 9. Hashai and Almor (2004); 10. Liesch et al. (2011); 11. Harveston et al (2000); 12. Acedo and Florin (2006); 13. Acedo and Galán (2011); 14. Acedo and Jones (2011); 15. Ahi et al. (2017); 16. Francioni et al. (2015); 17. Figueira-de-Lemos et al. (2011); 18. Maitland and Sammartino (2015a); 19. Maitland and Sammartino (2015b); 20. Zahra et al. (2005); 21. Halikias and Panayotopoulou (2003); 22. Armstrong et al. (2012); 23. Gavetti (2012); 24. Mintzberg et al. (1976); 25. Dijksterhuis et al. (2006); 26. Simon (1955); 27. Simon (1987); 28. Nadkarni et al. (2011); 29. Fatehi and Ghadar (2014); 30. Cesinger et al. (2012); 31. Sommer (2010); 32. Sadler-Smith (2016); 33. Kickul et al. (2009); 34. Hambrick and Mason (1984); 35. Baron and Ward (2004); 36. Chaston and Sadler-Smith (2012); 37. Mitchell et al (2002); 39. Narayanan et al. (2011); 40. Allinson et al. (2000); 41. Evans and Stanovich (2013); 42. Gallén (1997); 43. Kahneman and Tversky (1979); 44. Kahneman (2003); 44. Evans (2008); 45. Dutta and Thornhill (2008); 46. Epstein (1994); 47. Kahneman and Frederick (2002); 48. Strack and Deutsch (2004); 49. Healey and Hodgkinson (2014); 50. Salas et al. (2010); 51. Fellows (2004); 52. Akinci and Sadler-Smith (2012); 53. Kozhevnikov (2007).

Studies based on decision-making in internationalization have tended to adopt an 'objective' decision-maker perspective, assuming that everyone behaves following the rational mandates (Buckley et al., 2007). Consequently, in these situations, the liabilities of foreignness and of outsidership are the main barriers that firms should overcome in their international entries.

According to the non-gradualist approach within international entrepreneurship, the decision-maker does not always choose the lowest cost location for each activity and even firms may follow a different logic: exploiting international markets without the need of first exploiting the domestic markets (Oviatt and McDougall, 1994; 1999). Adopting an accelerated or early internationalization patterns implies a more entrepreneurial attitude, more inclined to accept what most would qualify as high levels of perceived risk (Cesinger et al., 2012). Most of the research on this issue has been conducted in certain industries qualified as global in scope, such as high-technology and knowledge-intensive services (Rialp et al., 2005). Perhaps pushed by the industry characteristics, what firms can only do is to develop the resources and capabilities needed to achieve a relevant degree of internationalization rather rapidly (Fatehi and Ghadar, 2014; Harveston et al., 2000; Knight and Cavusgil, 2004). An additional argument is that products of firms competing in high-tech and KIS are subjected to a high asset specificity that leads firms to high-control modes (Bruneel and De Cock, 2016). However, when demand uncertainty in host market is high, these SV's will tend to choose low-control modes (Bradley and Gannon, 2000). Consequently, uncertainty has a higher impact on the pattern of internationalization than asset specificity and industry features.

Oviatt and McDougall (1994, 1999) emphasized extensively that the entrepreneurial orientation is the main characteristic of these firms' managers. A higher entrepreneurial orientation, as a typical feature of entrepreneurs, is frequently linked to a higher predisposition to initiative and achievement risk-taking (Sadler-Smith, 2016). Furthermore, Busenitz and Barney (1997) found that entrepreneurs are willing to accept higher levels of risk than the general population of managers since the former is more intuitive and exhibit higher levels of overconfidence. Therefore, decision-makers in INVs and BGs usually accept affordable losses when going international by following riskier patterns than those the U-M process school posits. Even the entrepreneur of these firms exhibits a relevant expertise in the industry and/or international activities

(Oviatt and McDougall, 1994; 1999; Rialp et al., 2005). That higher level of overconfidence among entrepreneurs leads them to see more opportunities than threats (Krueger and Dickson, 1994). Therefore, these managers relativize the perceived uncertainty and risks in their international business decisions. In fact, in their experimental study Buckley et al. (2007) showed that (a) there is a great heterogeneity among choices made by managers in terms of FDI, (b) they are less likely to make investments abroad when political uncertainty is high, or costs associated to the market are high, and (c) managers with less FDI experience are more risk-averse. Furthermore, they concluded that when managers were following a staged logic, then they split investment into smaller parts with the intention to increase it gradually in subsequent stages. Since experiential knowledge is a relevant part of internationalization theory, it then seems plausible that heterogeneity in patterns of internationalization is the result of an idiosyncratic combination of host-environment uncertainty, industry, firm and manager's characteristics.

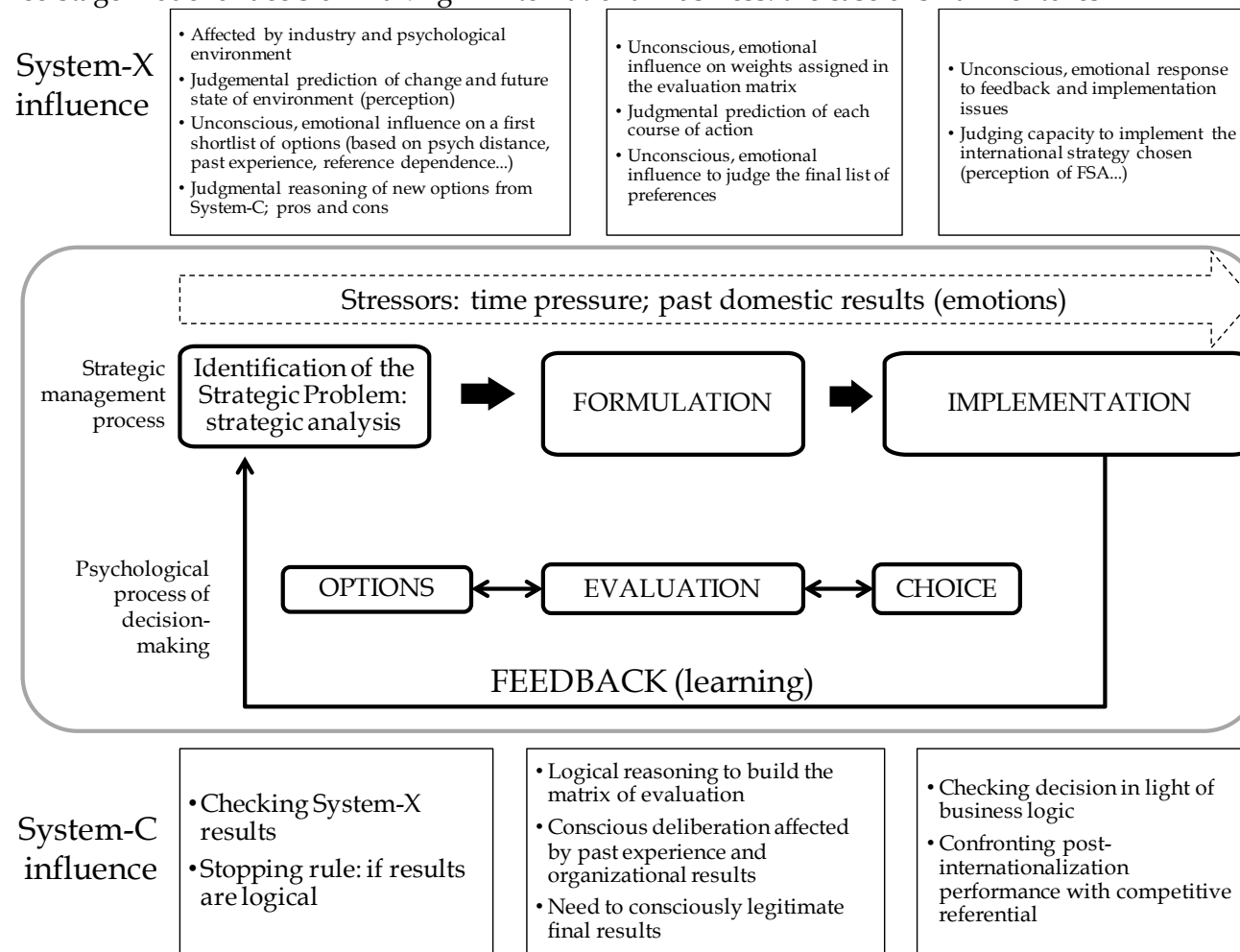
Since internationalization has been described as a process of gaining experiential-based knowledge, it seems that the cognitive approach will help understand the three-stage process of decision-making as summarized by Fellows (2004): options, evaluation, and choice. Cognitive science has posited that perception precludes information analysis and that, according to Kahneman (2003), our brain may bias the representation of reality based on experiences. Decisions are often a function of the experience and strongly depend on the past behavior of the entrepreneur (path-dependence), which is also part of the international experience construct as Buckley and colleagues (2007) showed in their experimental design.

The Dual-Process Theory approach of how individuals process information to make a final decision entails three interrelated processes, namely perception, System-X and System-C (Kahneman, 2003). Figure 5 summarizes the potential impact of each system on the three-stage process of decision-making in IB. According to Kahneman (2003), perception precludes cognition so the way we shape what we know (the representation our cognition yields) is influenced by our perception. Therefore, entrepreneurs with well-trained and high levels of both cognitive systems will have a more accurate representation of the environment and its challenges and will be less exposed to biases stemming from a wrong interpretation their cognitive systems may make. According to main authors in this field (Kahneman, 2003;

Evans, 2008; Evans and Stanovich 2013), System-X is effortless and unconscious and follows perception providing immediate impressions based on experience, emotions, and feelings. However, it is more exposed to cognitive biases. System-C requires the use of cognitive resources by conscious deliberation. Since it bases its results on data and information analysis, it is more rational and objective than System-X and it is less subject to biases. According to those authors, an intermediate approach to decision-making includes heuristics, which happen because our brain tries to reach a solution by minimizing the use of cognitive resources. This has been investigated in international business as systematic and non-systematic approaches to internationalization (e.g. Andersen and Buvik, 2002), and also from the perspective of managerial representation (e. g. Maitland and Sammartino, 2015a).

The ability of the decision-makers to make sense of the environmental uncertainty and complexity is tied to their mindset and the environmental representation they elaborate. The literature on this topic suggests that the decision-makers mindset influences actions through three sensemaking mechanisms, namely noticing, interpreting, and identifying appropriate actions (Nadkarni et al., 2011). Specifically, the Dual-Process Theory suggests that human limitations influence perceptions (noticing), evaluations (interpreting) and decisions (identifying appropriate actions) about organizational problems and hence shape firm choices and behavior (Evans, 2008), in what has been labelled as bounded rationality. In SVs, the entrepreneur-manager triggers strategic decisions (Halikias and Panayotopoulou, 2003), which is affected by his/her perception of differences between domestic and host market conditions (Francioni et al., 2015; Armstrong et al., 2012)

Figure 5: Three-stage model of decision making in International Business: the case of small ventures



Source: own draft from the psychological process of decision-making of Fellows (2004) and strategic management process of Narayanan et al. (2011).

Challenging the U-model, recent literature positioned at the intersection of a psychological approach to decision-making and international business has showed that there is substantial heterogeneity in how managers make sense of the international business opportunities (e.g., Maitland and Sammartino, 2015b), when explaining the behavior of firms that certainly do not follow the traditional sequential and gradual pattern of the international process school (Knight and Liesch, 2016; Hashai and Almor, 2004). Therefore, the ultimate explanation of the heterogeneous choices of internationalization seems to lie at the managerial level.

Empirical studies have increasingly drawn the attention to features of entrepreneurs in international business and cognitive systems as explanatory factors of the firm's decision-making process and as determinants of behaviors in international entrepreneurship (e.g., Acedo and Jones 2007; Sommer 2010). Cognitive systems are responsible for how individuals acquire, process, and organise internal and external information to obtain judgments in order to decide (c.f. in the integrated framework of Kozhevnikov, 2007). Consequently, decisions are made by the interaction of two intertwined processes acting in the human brain (i.e., cognitive systems) when processing information and judging external stimuli that shape the individual's decision and subsequent behavior (see Evans, 2008; for an extensive review see Salas et al., 2010; Powell et al., 2011; Hodgkinson and Healey, 2011; for a historical review of judgment in management see Akinci and Sadler-Smith, 2012).

Over the time cognitive reasoning has received much less systematic research attention in the current stream of internationalization process literature, which is at the core of the micro-foundations of the internationalization research. To address this lack of research, I propose to combine the staging process of decision-making with the approach from the dual process theory in its application to decisions of internationalization of SVs. Accordingly, the study of how decisions are made regarding the internationalization pattern should approach from the viewpoint of the combination of both processes, firm's decision-making, and cognition. To address this, I introduce problem setting, development of hypotheses and investigation model in the next section.

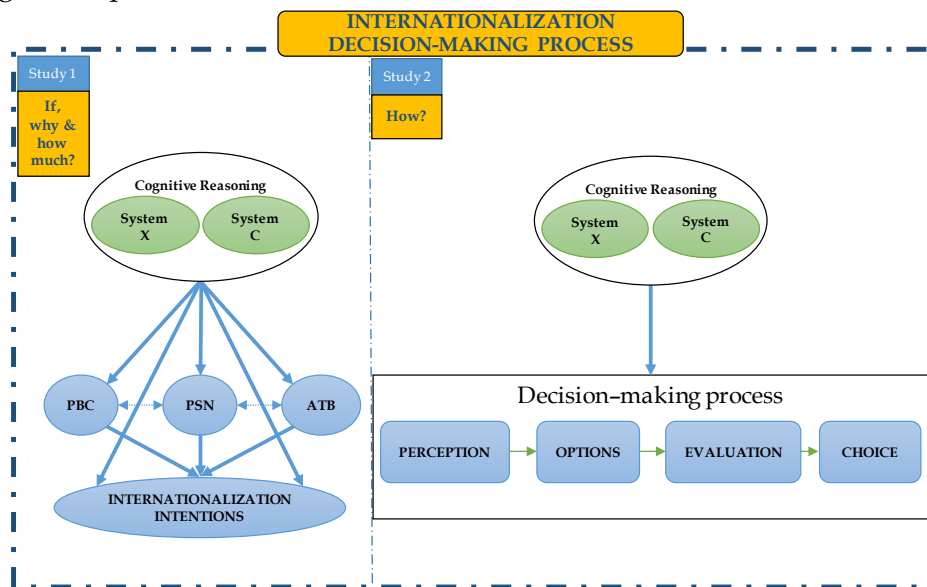
3. PROBLEM, HYPOTHESES AND INVESTIGATION MODEL

RESEARCH SCOPE	THE ROLE OF MANAGERIAL COGNITIVE REASONING ON THE INTERNATIONALIZATION DECISION-MAKING OF SMALL VENTURES
CHAPTER 1.	INTRODUCTION, OBJECTIVES, JUSTIFICATION AND STRUCTURE OF RESEARCH
CHAPTER 2.	LITERATURE BACKGROUND: COGNITIVE REASONING SUPPLEMENT TO THE PROCESS OF INTERNATIONALIZATION
CHAPTER 3.	PROBLEM, HYPOTHESES AND INVESTIGATION MODEL 3.1. Study 1: International entrepreneurship intentions explained through cognitive systems 3.1.1. The impact of cognitive reasoning on attitude toward the behavior 3.1.2. The impact of cognitive reasoning on perceived social norms 3.1.3. The impact of cognitive reasoning on perceived behavioral control 3.1.4. The mediated and interactive effects of both cognitive reasonings on IEI through ATB, PSN, and PBC 3.2. Study 2: Cognitive reasoning role on the internationalization decision making process 3.2.1. The impact of cognitive reasoning on the perception-options stage 3.2.2. The impact of cognitive reasoning on the evaluation stage 3.2.3. The impact of cognitive reasoning on the final choice stage 3.2.4. The hypotheses on the impact of cognitive reasoning on the internationalization pattern chosen
CHAPTER 4.	METHODOLOGY FOR THE EMPIRICAL CONTRAST
CHAPTER 5.	RESULTS OF THE EMPIRICAL CONTRAST
CHAPTER 6.	DISCUSSION OF THE RESULTS
CHAPTER 7.	CONCLUSION

CHAPTER 3. PROBLEM, HYPOTHESES AND INVESTIGATION MODEL

To address the research questions and develop the internationalization decision-making process framework, the thesis was split into two studies. This was because we wanted to answer the questions regarding *whether, why, how and how much* the managerial cognitive reasoning affects the internationalization decision-making process. The first study is conducted among university students – future international managers in which we have included metrics of cognitive systems under the umbrella of the Ajzen’s (1991) Theory of Planned Behavior-TPB while adapting the metric of Liñán and Chen (2009) to assess the *international* entrepreneurial intention (IEI). This sample was selected because we needed to test the hypotheses under high uncertainty conditions. This study should answer *whether, why* and *how much* questions. The qualitative grounding theory approach is applied in the second study in order to investigate the *how’s*, i.e. how cognitive reasoning of the SV’s managers affects the internationalization decision-making process across each stage of the decision-making process. The reason behind this split is the nature of the questions addressed. While the first study is quantitative, the second one is qualitative in the nature of the questions addressed. The unifying factor is the exploratory analysis performed by both studies in order to address yet unexplored issues.

Figure 6: Split of research into two studies



Source: own draft

3.1. STUDY 1: INTERNATIONAL ENTREPRENEURSHIP INTENTIONS EXPLAINED THROUGH COGNITIVE SYSTEMS: HYPOTHESES

I adopted the Ajzen's (1991) Theory of Planned Behavior instead of alternatives such as the Shapero's (1982) model of the entrepreneurial event because Krueger et al. (2000) proved that both perform similarly. To the best of my knowledge, among university students, most of the research on entrepreneurial intentions has been framed in the former Theory (e.g. Kickul et al., 2009; Liñán & Chen, 2009; García-Rodríguez et al., 2016). Therefore, I chose it for allowing comparability. The study 1 model includes three constructs as antecedents of intentions, namely attitude toward the behavior-ATB, perceived social norms-PSN and perceived behavioral control-PBC. The first one refers to the individual's expected values, the second contains the normative beliefs and the third includes the perceived feasibility and self-efficacy. In performed study, this includes whether the individual has a positive position towards the act (starting an international new venture in our case), his/her perception of whether the act is well considered and acknowledged among his/her immediate circle of relations and society, and whether s/he perceives s/he will be able to start the venture internationally and to maintain it controlled.

In line with research questions, I propose that individuals perceive the behavior differently depending upon how they weigh each cognitive System, i.e. his/her natural tendency to rely more on System-X or on System-C when interpreting information to decide. Therefore, I claim that cognitive reasoning, represented by the cognitive systems, antecedent ATB, PSN, and PBC: perception influences all these constructs and the individual's final decision is the result of the intervention of both cognitive systems. Following hypotheses, development is aimed at providing theory-driven arguments on how cognitive systems will affect every one of the three constructs. I exclude the rationale of TPB proven relationships because they have extensively been studied. The targeted construct is the intention to start and grow a new venture internationally, named as international entrepreneurial intention.

3.1.1. THE IMPACT OF COGNITIVE REASONING ON ATTITUDE TOWARD THE BEHAVIOR

One of the precursors of the intentional behavior is the individual's ATB (1991; Ajzen, 1987). In entrepreneurship, the behavior is understood as the act of starting and growing a new venture (Krueger et al., 2000). For the purpose of this dissertation and the first performed study in which I am addressing the issues if CR plays a role in IDMP and if so why they are relevant, this construct includes the individual's expected values of the IEI.

Ajzen (1991, p. 188) defines ATB as "[...] *the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behavior in question*". It contains the individual's idiosyncratic preferences to choose a certain course of action, essentially, whether the idea is appealing for him/her (Krueger et al., 2000). It entails his/her expectations about the outcomes derived from performing the said behavior such as personal preferences of autonomy, career choice, self-fulfillment, personal satisfaction, or personal quality of life (wealth, stress...), among others (Krueger et al., 2000). Kickul et al. (2009) showed that experiential predominance (i.e. those with a marked preference for using his/her System-X) are more confident in his/her ability to recognize opportunities, but not in subsequent processes (assessment, evaluation, planning, and marshaling of resources). Furthermore, individuals with a preference for rational reasoning were more confident in these latter processes than intuitive ones. Accordingly, opportunity recognition is more related to System-X than to System-C: the individual's thinking tends to be predominantly intuitive when s/he is searching for opportunities (Olson, 1985). Opportunity recognition triggers new venture creation at early stages of development, as such is framed in the performed study.

Castellano et al. (2014) introduced cognitive systems in the entrepreneurial intentions under the umbrella of TPB. They used the Betsch et al. (2008) scale of "Preference for Intuition and Deliberation". Their main results showed no significant differences between cognitive systems in terms of entrepreneurial intention. However, this may be explained by the operationalization of cognitive systems metrics. They chose to categorize sample in cognitive reasoning into four styles by a somewhat arbitrary threshold (above/below the median): an individual near but below the

median in both dimensions was included in the same category as one significantly below both medians. Nevertheless, they found a tendency for high intuitive individuals to show higher entrepreneurial intention and a more positive attitude toward the behavior.

In their qualitative study of how cognition affects growth intentions of new ventures, Dutta & Thornhill (2008) proposed that holistic entrepreneurs experience larger changes in growth intentions than analytic ones when they perceive changes from initial expectations. The holistic adjective is part of the nature of System-X (Evans and Stanovich, 2013). Therefore, when a decision-maker holds a more holistic vision based on his/her System-X developed over the years, s/he will tend to perceive that there are more gains than losses arising from starting a new venture that goes international: s/he will perceive a positive net effect that entails a more positive attitude.

Molaei et al. (2014) found that university students with a marked intuitive cognitive system have more ideas to start a business and they are richer in content. This can be related to the notion that, when trained, System-X is more creative than System-C (Ward, 2004), so more ideas will imply a more positive predisposition toward the behavior.

Individuals with a preference for his/her System-X are more likely to find business opportunities by observing environmental cues (Kickul et al., 2009; Olson, 1985). Since they have their System-X more developed, they will trust more on their quick, effortless arousal of ideas than those holding a tendency to rely more on System-C (Hayashi, 2001). On the other hand, analytic individuals need that System-C checks every intuitive thinking that emerges (Kahneman, 2003). This requires time and cognitive resources devoted to gather and analyse all the possible information. This is why decision-makers relying on System-C will initially tend to show a lower attitude to start an international business: they require further information and analysis. Consequently, their starting attitude will be more negative than the students relying more on System-X.

Research evidence is pointing out that predominant experiential reasoning helps recognize business opportunities. Due to its nature (effortless,

automatic, expertise-based), System-X is quicker than System-C in realizing that a business opportunity exists or that it can be created. Meanwhile, rational reasoning helps decrease the level of uncertainty. For the purpose of the study, I chose sample which traditionally considers that starting an international venture is a difficult task and its result is very uncertain (i.e. university student near to enter labor market) (Sommer, 2010). Yet those who rely more on his/her System-X will display a more favourable attitude: it speeds up the process of adaptation to changes. It also helps to lower the levels of perceived uncertainty (Dutta and Thornhill, 2008; Busenitz and Barney, 1997). System-X is based on expertise-based knowledge; it learns from past expertise. Mitchell et al. (2008) argue that past failures influence the entrepreneurial mindset. Heuristics are also an essential part of starting a new venture: they are shortcuts arisen from experience and retrieved usually by System-X to reach an immediate decision. Thus, those using extensively the System-X will tend to be more trained in this retrieval process, thus more alert to international business opportunities. Therefore, attitudes toward the behavior will be more favourable among future international venture managers preferring System-X rather than System-C. Therefore, two hypotheses linking cognitive systems and ATB are expressed:

Hypothesis 1a: the higher the reliance on System-X, the more favourable attitude to start an international venture

Hypothesis 1b: the higher the reliance on System-C, the lesser favourable attitude to start an international venture

3.1.2. THE IMPACT OF COGNITIVE REASONING ON PERCEIVED SOCIAL NORMS

The second construct is the perception of social norms, which includes the normative beliefs of the behavior shaped by referent individuals or groups, those who approve or disapprove the behavior or even behavioral models that can be imitated (Ajzen, 1991). It includes the perspectives of key individuals in the society on performing the behavior (Krueger et al., 2000). In the first study, this relates to referent individuals who are a model for starting an international business. The individual should consider the aforementioned individuals and groups' opinion as relevant for this to have an impact on

intentions, i.e. s/he is highly motivated to comply with the model (Ajzen, 1991).

The critical issue here is the referent point. For future international entrepreneurs, these models will range from inner to outer circles: family, friends and relatives, local community, society and, as a particular case. Along with the institutional support, it is also important that individuals actually *perceive* such support, which will influence the construct of PSN. For instance, Dabic et al. (2014) showed that some groups of faculty members could perceive differently the level of support of university policies in terms of fostering a more entrepreneurial university. In the results of Autio et al. (2001), the impact of PSN on intentions was higher among Stanford students than in Finland, Sweden, and other U.S. university, being the former university a model in terms of this support. The former university reported the highest score in the PSN construct. Therefore, it seems the impact of PSN on intentions will be higher in contexts that are remarkably supportive than in less supportive ones. Yet the key is *perception*, influenced by the cognitive strategy the individual follows to know what s/he knows.

Dutta and Thornhill (2008) found that analytic individuals are (comparatively) risk-averse and rely more on prevailing norms and ways of doing things, i.e. they need a referent point more than intuitive ones. Accordingly, it is very likely that predominantly rational decision-makers are more alert of potential frameworks they can adopt to guide his/her behavior. This increased level of alertness implies augmented levels of analyses performed *ex-ante*, which will make them more critical of extant social norms when it comes to assessing international entrepreneurship. This negative perception can be even higher in low supportive contexts, which will lead analytic students to avoid the behavior (they are more risk-averse) and to judge more critically that context.

Krueger (2009) argues that rational individuals can easily judge the social norms after perceiving the feasibility and desirability of initiating a new venture. This implies that the individual's System-C tries to rationalize the environmental information relative to referent models in a conscious, deliberative way. Castellano et al. (2014) did not link cognitive systems with social norms. However, the latter authors controlled for the impact of two

nationalities, France and the U.S. Both contexts are very different in terms of international business opportunities and social models. Their results showed that French individuals display, on average, more entrepreneurial intentions, feel they have more control of behavior and have a more positive attitude than the U.S. counterparts have. Without information on which one is more supportive and additional references on social referents, it seems that future entrepreneurs perceived both contexts as culturally different. Thus, it is likely that individuals who rely more on System-C will perceive the extant social norms more negatively because exacerbated System-C weighs in a higher extent the negative than the positive influences around the referents of starting-up an international business.

Liñán et al. (2011) showed the existence of regional differences in entrepreneurial intentions among Spanish sample. Catalonia, the most developed region among those included in the study, has the most favourable social valuation of entrepreneurship. This means that the perception of social norms and referents differs across regions being higher in the cultural contexts where the roles are more positive. Furthermore, the authors argued in favour of closer valuation of social referents, i.e. the closer the referent is the more positive its consideration will be. Therefore, the critical issue is which cognitive system will predominate to assess social referents.

Social intuition is a type of cognition emanating from System-X: it refers to how well one anticipates how another individual behaves in social interactions. This type of understanding implies that experiential reasoning will yield an intuitive valuation of referential norms in a holistic way. Students holding a strong reliance on his/her System-X will tend to perceive more positively the extant social norms due to his/her ability to summarize pros and cons holistically, and to the fact that intuitive individuals tend to be more socially active. This is because they feel more confident on being able to interact successfully with others. These individuals improved social ability will enable them to discern between good and bad referents immediately and effortlessly. Therefore, when a decision-maker is asked for assessing the social norms around starting an international venture, s/he will be able to find a good referent quicker and more effortlessly than a decision-maker that relies more on his/her System-C. In addition, it is very likely that examples of bad referents come to the rational individual mind more often than good examples: their tendency to analyse everything will give them the bad rather than the

good details of any referent. This social intuition is the base for the first study next hypotheses on how both systems affect the perception of social norms:

Hypothesis 2a: the higher the reliance on System-X, the more positive perception of social norms to starting an international venture

Hypothesis 2b: the higher the reliance on System-C, the more negative perception of social norms to starting an international venture

3.1.3. THE IMPACT OF COGNITIVE REASONING ON PERCEIVED BEHAVIORAL CONTROL

Control beliefs deal with whether the individual considers s/he has enough resources and capabilities to maintain the control over the behavior once s/he performs it (Ajzen, 1991). It is assimilated to the Bandura's (1986) perceived self-efficacy or feasibility, as further elaborated by Shapero's model of the entrepreneurial event, in light of the comparison of Krueger et al. (2000). PBC correlates with opportunity recognition and risk-taking (Krueger and Dickson, 1994) so, in the first study, decision-maker will tend to have more intentions to perform the behavior if they think they will be able to maintain the control of the entire process and outcomes (Krueger et al., 2000; Ajzen, 1987). Accordingly, it entails the perception that one will be able to do so and the feeling that one will control both the process and outcomes (Liñán and Chen, 2009).

The critical issue here is the need for control associated with the analytic profile (Dutta and Thornhill, 2008), which implies a preference for System-C than for System-X. Rational and more analytic prone individuals need further information to make a decision (Allinson and Hayes, 1996). When they feel unsure about the potential outcomes, they will decide to postpone the behavior, i.e. a type of procrastination: their intentions to start an international venture will be lower than for those relying more on System-X. On the other hand, the holistic, eclectic nature of System-X will help decision-makers who rely mostly on it to feel more confident on their ability to

undertake the behavior. In addition, Dutta and Thornhill (2008) found that intuitive profiles tend to attribute a higher than average positive performance to behaviors stemming from the internal locus of control, while they consider a lower than average negative performance to actions stemming from the environment (external locus of control). This means that System-X emerges from the inner unconscious thoughts that tend to empower the individual to survive in any situation and thus, regardless the external stimuli, s/he will feel s/he is capable of doing anything. It implies an overestimation of his/her abilities to maintain the behavior controlled. Since individuals who strongly rely on experiential reasoning (i.e. System-X feel) are able to seize on their expertise-based intuition, they will feel more confident to start a business. It is important to consider that a relevant portion of entrepreneurs recognizes they use some level of improvisation in business development, more than non-entrepreneurs do (Bingham, 2009). Conversely, System-C individuals are conscious and rational in nature, so they will tend to follow a gradual approach to risky behaviors (Dutta and Thornhill, 2008), and will show a lesser perceived behavioral control. This may imply the System-X will overestimate the future entrepreneur's capability to maintain the international venture controlled. Thus, the following hypotheses arise:

Hypothesis 3a: the higher the reliance on System-X, the more positive perception of behavioral control to starting an international venture

Hypothesis 3b: the higher the reliance on System-C, the more negative perception of behavioral control to starting an international venture

3.1.4. THE MEDIATED AND INTERACTIVE EFFECTS OF BOTH COGNITIVE REASONINGS ON IEI THROUGH ATB, PSN, AND PBC

All previous hypotheses lead to the overall idea that one system leads to increased international entrepreneurship intentions than the other by its effect on the antecedents, namely ATB, PSN, and PBC. Thus, individuals approaching this decision-making process by trusting more on their System-X

than on System-C will display attitudes to this behavior that are more positive, will perceive that social referents are more positive, and will feel they are more capable of maintaining the control over the behavior. All the latter leads to an indirect positive impact of System-X on IEI.

Conversely, System-C will intervene by yielding additional impacts on the potential risks and benefits. Since System-C refers to rational reasoning, it is very likely that individuals relying more on it conclude that they need additional reflections to start a business operating internationally. Therefore, their attitude will be more negative, they will find more cons than pros amongst social referents and will feel more insecure about their abilities to maintain the behavior controlled. In summary, the three latter antecedents purely mediate the relationship between cognitive systems and international entrepreneurial intentions:

Hypothesis 4a: System-X has no direct effect on the intentions to start an international venture

Hypothesis 4b: System-C has no direct effect on the intentions to start an international venture

An additional issue is to what extent both System-C and System-X may interact relative to the individuals' IEI, in particular, and to the entrepreneurs' in general. The Frederick's (2005) experiment shows that both Systems operate when individuals make decisions. However, in the experiment named "the bat and the ball", the author informed that some individuals, immediately, acknowledge that the impulsive answer was wrong (System-X alerted them) and subsequently used System-C to solve the equation. Kahneman (2003) also argued, theoretically, that both Systems intervene in decision-making. While judgments include emotions (System-X), System-C yields outcomes that are more rational. Perception precedes to both systems. Moreover, perception may be biased by both systems depending upon experiences, and even mood and feelings.

Therefore, more than whether those systems act in parallel or one controlling the other (thus sequentially), the critical issue should be to what extent each of them influences the behavior IEI. Most of the research on

cognitive systems have tried to classify individuals in types because they represent the cognitive strategy one tends to approach decisions. There are certain findings which argued that systems are relatively stable over time. However, a recent literature review of cognitive systems has found that cognitive system performance is task and context-dependent (Phillips et al., 2016). Therefore, individuals can change the weight of each cognitive system depending upon the decision to be made. In the context of deciding to start an international venture, it is plausible an interaction between System-X and System-C. In fact, the studies dealing with cognitive systems in entrepreneurship tended to categorize individuals in types (Kickul et al., 2009; Molaei et al., 2014; Castellano et al., 2014). Certainly, it is possible to find individuals who show a preference for both cognitive systems; for one of them; or for none of them. Yet the question is to know if individuals that balance both cognitive systems display a different IEI than those displaying an unbalanced distribution (i.e. predominance of one System). In order to test this, the next competing hypotheses arise:

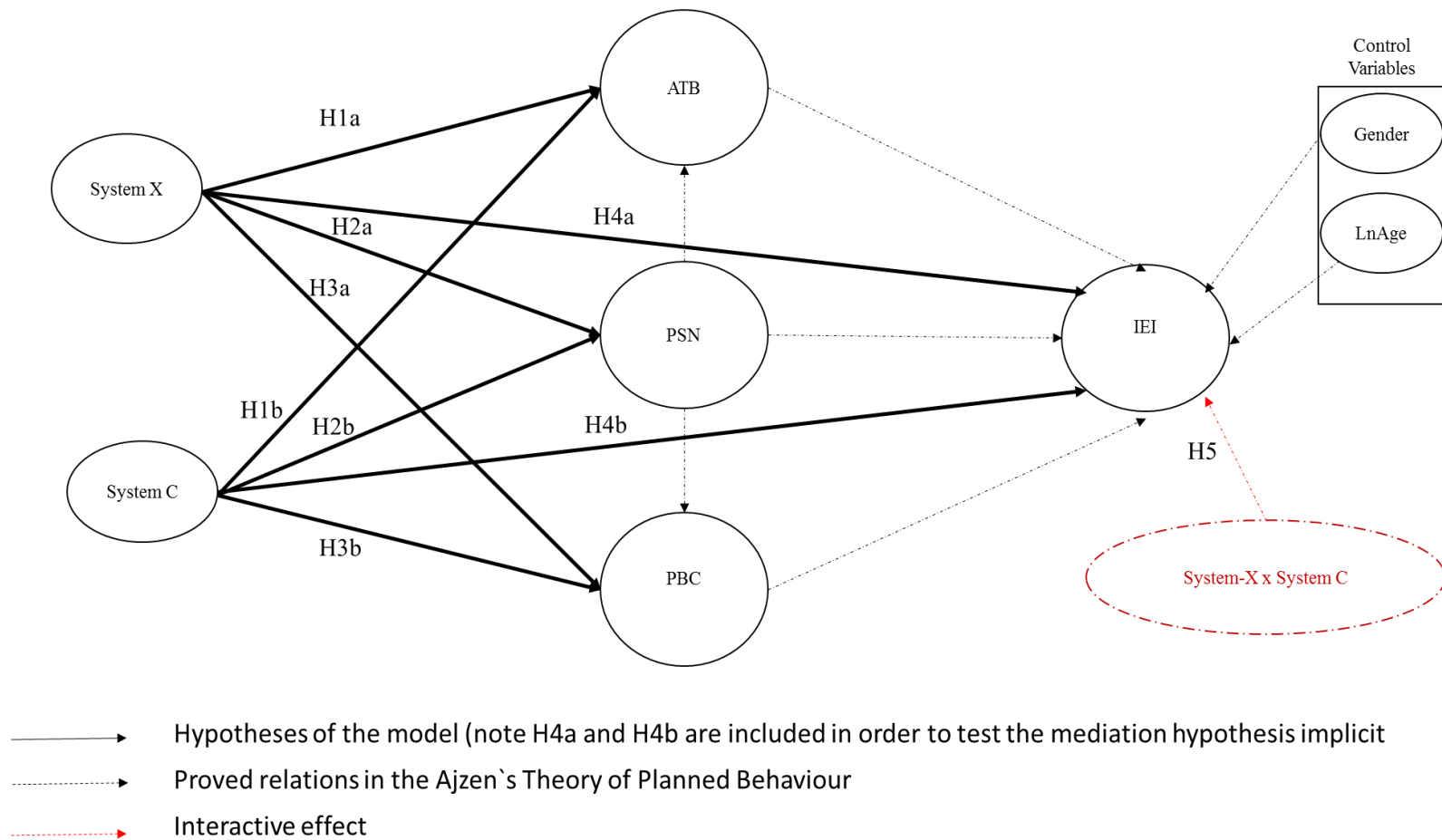
Hypothesis 5: The balance in the use of both cognitive systems will have an impact on individual's IEI so that:

Hypothesis 5a: a predominance of one system over the other will display a higher intention to start an international venture

Hypothesis 5b: a balance between both systems will display a higher intention the intentions to start an international venture

Due to the lack of theoretical references, one cannot anticipate the sign of these relationships. Figure6 summarizes the hypotheses to be tested. It is expected that hypotheses H1 to H3 will be accepted and that there will be not the direct relation from cognitive systems to IEI to H4a and H4b. This will mean that cognitive systems are antecedents of ATB, PSN, and PBC so the model will be purely mediated in the terms of Baron and Kenny (1986). Hypotheses H5a and H5b will test the potential interaction between both systems regarding the international entrepreneurship intention

Figure 7: Scheme of the testing hypotheses under the framework of the Ajzen's Theory of Planned Behavior for investigation study 1



3.2. STUDY 2: THE COGNITIVE REASONING ROLE ON THE INTERNATIONALIZATION DECISION MAKING PROCESS: HYPOTHESES

After establishing correlation among cognitive systems and international entrepreneurship intention as the succeeding precursors of the internationalization behavior (i.e. intention leads to action Bird, 1988) is the explanation of how cognitive reasoning plays a role in internationalization decision-making process.

As noted by Dutta and Thornhill (2008), entrepreneurs' perceptions of their environment are contingent on their cognitive systems. The extent to which a firm is motivated to internationalize is also dependent on the decision maker's perceptions about challenges and opportunities in the industry at the international level (Leonidou et al., 1998). The importance of the decision highlights the manager's perception of his or her knowledge of the internationalization process, which is likely to influence his/her evaluation of initial choice as a potential opportunity. This first step in organizational decision-making is about environmental perceptions and the way the decision-maker's cognitive systems process the derived outcome. Acedo and Florin (2006) addressed the importance of cognitive perception influence on the risk perception, which is correlated with internationalization commitment level and selected pattern. Furthermore, the international business literature has emphasized the role that managerial perception plays in the selection of host markets according to psychic distance and in correlation with experiential learning arising from cognitive systems (Johanson and Vahlne, 1977; Maitland and Sammartino, 2015b). Fatehi and Ghadar (2014) found that the decision maker's mindset affects the path the firm pursues to reach a global presence. All these findings lead the path toward the notion that the decision-makers cognitive reasoning could play a role in explaining the heterogeneous internationalization patterns choices.

The particular emphasis is added by following the Simon's (1987) arguments of bounded rationality choice, which are suboptimal although perceived as the best acceptable solution by the decision-maker. This is dependent on his/her perception and how his/her cognitive systems represent the stimuli as an opportunity or a threat. Sadler-Smith (2016)

proposed an explicit model in which intuition (linked to System-X) affects the opportunity recognition and evaluation, while System-C intervenes after that in order to choose a final option. While theoretically valid, this framework assumes that all the successful entrepreneurs would act in the same manner, while it is commonly known that some may rely more on his/her intuition or on his/her analytic system (Acedo and Jones, 2007; Acedo and Galán, 2011). Allinson et al. (2000) found that entrepreneurs are more intuitive than managers. Despite this, it does not mean that an analytic individual or one that is as intuitive as analytic cannot be a successful entrepreneur Baron and Ward, (2004). It just means that each individual reaches a decision differently, while the decision-making process is common.

3.2.1. THE IMPACT OF COGNITIVE REASONING ON THE PERCEPTION-OPTIONS STAGE

A lot of strategic decisions are based on predictions the decision-makers do relative to future changes and states in the firm's environment. The experience and the learning of how well it worked nurture these predictions. The same applies to the gradual view of internationalization: experience and experiential knowledge are crucial for the firm to deploy the required capabilities to advance to more committed modes (Johanson and Wiedersheim, 1975). In other words, the firm requires a period of adaptation, in particular in its first attempt to internationalize. After the decision to internationalize is made, during this first stage, emotions govern the consideration of first shortlists of strategic options. So, System-X initiates the selection (those that the manager is able to retrieve instantly influenced by his/her experience and feelings). Then System-C, which is analytic and rule-based, evaluates the list of first options. In the case of internationalization, this implies to address the issues of why they want to go international. Among these factors, Puig and colleagues (2014) suggested two big motives: a reactive decision to the strategic problem of the stagnant domestic market, and a proactive decision to seize on firm-specific advantages in the domestic market to continue the firm expansion internationally. The options at hand in this stage of IDMP are essentially relative to where (host market), how (mode of entry, level of commitment of resources with international markets) and when (time to internationalize). If the shortlist is satisfactory with the goals, then the stopping rule applies (guided by System-C reasoning) and the individual

advances to the next stage: an evaluation. Otherwise, decision-maker rational reasoning will complete the list deliberatively. However, individuals that rely heavily on experiential reasoning will tend to skip this stage and start evaluating directly the shortlist his/her System-X yielded. This notion is in line with Kahneman (2003) findings that our brain is trained to optimize the use cognitive resources, so an intuitive manager may feel satisfied with the first shortlist. Meanwhile, managers with a strong reliance on their System-C will feel a higher need to maintain the behavior under control (Acedo and Galán, 2011). This will entail the need for including more options analytically in the first stage.

3.2.2. THE IMPACT OF COGNITIVE REASONING ON THE EVALUATION STAGE

Although evaluation of previously selected options appears to be a purely deliberative and analytic process, it is not. In international business, managers have developed several heuristics, shortcuts to be able to deal with complex decisions like this (Schweizer, 2012). They can develop evaluative matrices to assess host-markets according to variables and weights. Yet once again, System-X intervenes: weights of each item are extensively based on emotions. If the entrepreneur decides to go international because of the stagnant domestic market, then the decision would be preponderant by survival actions. This will be a situation of avoiding potential losses. If the SV's decision-maker seeks to expand its activities internationally. Then the organization will tend to adopt profitability as the main goal and to seize on specific firm advantages. This is a decision involving the quest for potential gains. According to the tenets of Prospect Theory (Kahneman and Tversky, 1979), managers tend to adopt a riskier behavior to avoid potential losses than to seize on potential gains. Yet the two cognitive systems intervene in this decision. The difference between cognitive predominance in the evaluation stage of IDMP could lead the decision makers to internationalize at a different moment in a firm age. The evaluation stage duration in differentiation among small ventures internationalization speed and acceleration.

3.2.3. THE IMPACT OF COGNITIVE REASONING ON THE FINAL CHOICE STAGE

Decision-makers are facing the internationalization final choice under the conditions of increasing uncertainty and complexity. In case that the decision-makers` experiential reasoning disagrees with the final choice previously identified with evaluation phase, it is very likely that the decision is not legitimated by the venture. Once again, emotions, or what Salas et al. (2010) call associative parallel processing, will warn that some problem would occur in the prediction of the future result of such course of action. In an experimental study on deliberation without attention, Dijksterhuis et al. (2006) showed that, when there is a huge number of attributes to be assessed, System-X is able to outperform System-C, while the latter is best when that number is low.

3.2.4. THE HYPOTHESES ON THE IMPACT OF COGNITIVE REASONING ON THE INTERNATIONALIZATION PATTERN CHOSEN

Accordingly, the ability to internationalize sequential and gradual, early or accelerated represents a function of the firm's choice of the right timing, the right location and the right entry mode (Autio et al., 2000; McDougall and Oviatt, 2000). This is dependent on the manager's perception of external stimuli and his/her mental representation of how to best seize on international business opportunities, which may lead to skip some of the least committed modes at initial stages or even to obviate some stages claimed by the U-model. The early or accelerated approach represents a departure from the logic of the U-model. Since internationalization is a knowledge-based process, the less risky choice is to go international in a sequential and gradual manner in culturally/psychically close markets when the manager or the firm lack the required knowledge for distant markets. Yet that distance should be understood in terms of whether the decision-maker will be able to predict potential future states. This is dependent upon the decision-maker's perception of host-market validity. The INV and BG phenomenon implies more entrepreneurially oriented decision-makers than U-model, and more entrepreneurial orientation entails an overconfidence of the ability to go

international. Then it is plausible that more entrepreneurially oriented decision-makers are overoptimistic in perceiving culturally-psychically distant host markets as more valid than those following gradual logic.

In SV's all information is perceived by the entrepreneur who finally must decide. Acedo and Florin (Acedo and Jones, 2007) found that the CEO's cognitive reasoning played a role to explain the SME's degree of internationalization. Although the cognitive system is a discrete categorization of the use of both reasoning in a certain moment, this means that the cognitive approach is pertinent. Yet they found that international entrepreneurial individuals scored higher in the use of intuition and tolerance for ambiguity. Accordingly, it seems plausible that individuals perceive the same environment differently depending on their cognitive reasoning predominance.

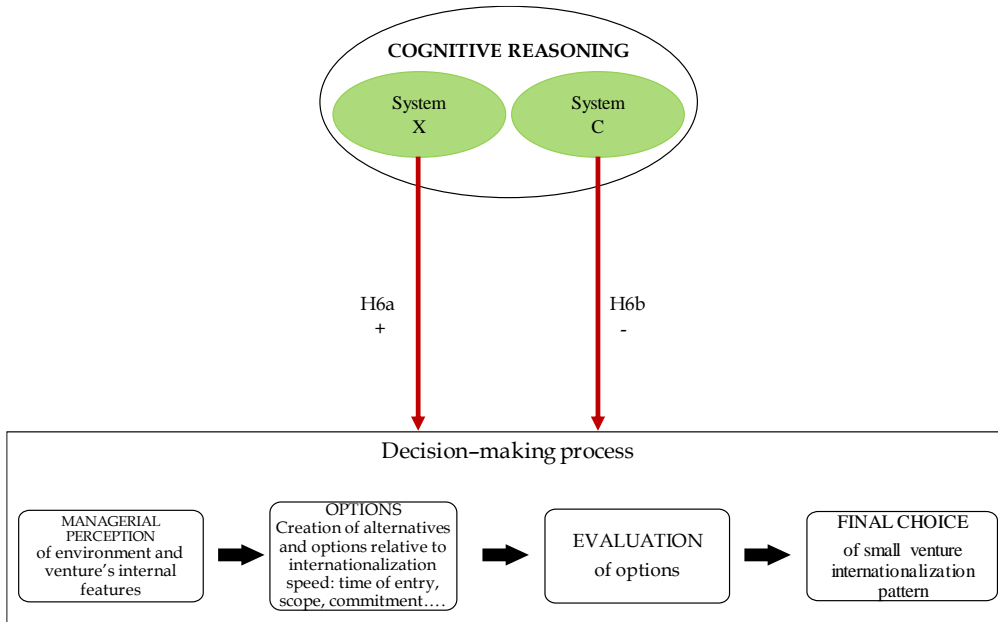
In the context of managerial cognition, rational individuals are conscious and more analytic in nature, so they will tend to follow a gradual approach to risky behaviors (Dutta and Thornhill, 2008), and will show a lesser perceived behavioral control. Conversely, individuals with a high reliance on her/his System-X are more likely to find business opportunities by observing environmental cues (Kickul et al., 2009). An increased level of reliance on System-X also helps lower the levels of perceived uncertainty, which is in line with the higher tolerance for ambiguity found by Acedo and Florin(2006). Following the argument of Sadler-Smith (2016) for entrepreneurship, following hypothesis of decision-maker cognitive systems effect on the choice of the pattern of internationalization (Figure 7) arise:

Hypothesis 6: The decision-maker cognitive reasoning will have an impact on small venture internationalization pattern:

Hypothesis 6a: System-X will accelerate internationalization decision-making process.

Hypothesis 6b: System-C will slow down internationalization decision-making process

Figure 8: Scheme for testing the effect of cognitive reasoning on the internationalization decision-making process choice for investigation study 2




CHAPTER 4: METHODOLOGY FOR THE EMPIRICAL CONTRAST

RESEARCH SCOPE THE ROLE OF MANAGERIAL COGNITIVE REASONING ON THE INTERNATIONALIZATION DECISION-MAKING OF SMALL VENTURES

CHAPTER 1. INTRODUCTION, OBJECTIVES, JUSTIFICATION AND STRUCTURE OF RESEARCH

CHAPTER 2. LITERATURE BACKGROUND: COGNITIVE REASONING SUPPLEMENT TO THE PROCESS OF INTERNATIONALIZATION

CHAPTER 3. PROBLEM, HYPOTHESES AND INVESTIGATION MODEL

CHAPTER 4.  METHODOLOGY FOR THE EMPIRICAL CONTRAST

- 4.1. Quantitative Study-1
 - 4.1.1. Sample and Variables
 - 4.1.2. Statistical method: Partial Least Squares and Structural Equation Modelling
 - 4.1.3. Data adequacy, reflective outer model evaluation and inner model evaluation
- 4.2. Qualitative Study-2
 - 4.2.1. Case Selection and variables
 - 4.2.2. Data Collection
 - 4.2.3. Methods for data Analysis

CHAPTER 5. RESULTS OF THE EMPIRICAL CONTRAST

CHAPTER 6. DISCUSSION OF THE RESULTS

CHAPTER 7. CONCLUSION

CHAPTER 4. METHODOLOGY FOR THE EMPIRICAL CONTRAST

4.1. QUANTITATIVE STUDY-1

4.1.1. SAMPLE AND VARIABLES

The university where hypotheses for study 1 are tested is not considered among the top supportive ones in terms of international business and entrepreneurship, but this provides the opportunity to test how hypotheses perform in a context of low support and high uncertainty. Yet the university does have activities for fostering entrepreneurship, such as a pre-incubator facility that has helped to start 18 spin-offs since its creation in 2012. A random sample is selected among undergraduate students coursing upper years of the undergraduate and master program in Business Management. In this degree, entrepreneurship is an elective subject. The sample is representative of the population of Business Management students in this University in terms of gender (Chi-square 0.04, below the critical threshold of 5.02, 1 d.f.; alpha-level=0.05). We focused on students coursing the 2 last years, as well the master students as they are near graduation and close to entering the labour market in short (see table 5 for sample characteristics).

Table 5: Sample main characteristics

	N=134	Sample (%)
Gender		
Male		41,8 %
Female		58,2 %
Age		
20-21 y.		38.8 %
22-23 y.		25.4 %
>23 y.		35.8 %

The survey was conducted between February and April 2016 and February and March of 2017. To avoid common method bias in the survey, the five blocks of questions (ATB, PSN, PBC, IEI, and CSI) were split and retrieved in different moments (separated by 1 week each).

TPB is studied by including latent variables and Likert measures for each of them. Accordingly, along with Theory of Planned Behavior constructs ATB (see Table 6), PSN (see Table 7), and PBC (see Table 8), we included metrics for international entrepreneurial intention-IEI (see Table 9) and control variables (age -measured as number of years-, and gender), for complete questionnaire see Appendix 1.

Liñán and Chen (2009), in their study of entrepreneurial intentions among university students, suggested that intentions should be measured in a more restricted form, in terms of behavioral intention (“I intend to...”), based on the slightly better predictive power found by Armitage and Conner (2001). This differs from desire (“I intend to...”) and self-prediction (“How likely it is...”). However, in order to meet research objective of this dissertation I decided to approach this from a wider perspective in particular exploratory study of the effect of cognitive systems on IEI. Accordingly, we mixed the metrics of Liñán and Chen (2009) with those suggested by Autio et al. (2001). The items are adapted to the particular issue of international intention, so the issue of “international” was explicitly included, where appropriate, in the four constructs – see bellow- (ATB, PSN, PBC, IEI).

Table 6: Items used for measurement of ATB

ATTITUDE TOWARD THE BEHAVIOR		
Codes	Items	Source
AHA1	Creating my own business with international orientation is an opportunity to achieve success	Autio et al. (2001); Liñán and Chen (2009)
rAHA2	I like working with third parties	
AHA3	I would prefer to operate a small international business instead of being a mid-level manager in a company	
AHA4	Being an entrepreneur with an international vocation implies more advantages than disadvantages	
AHA5	A career as an entrepreneur with an international vocation is attractive to me	
AHA6	Being an entrepreneur with an international vocation would entail great satisfaction for me	

Table 7: Items used for measurement of PSN

PERCEIVED SOCIAL NORMS		
Codes	Items	Source
NS1	Owners of small international companies can succeed in the current economic situation	Autio et al. (2001); Liñán and Chen (2009)
NS2	I have great respect towards the owners of small international companies	
rNS3	With regulation and the current bureaucracy, it is difficult to manage a profitable international business	
NS4	If I decided to create my own international company, I would receive a lot of support from my family	
NS5	If I decided to create my own company with an international vocation, I would receive a lot of support from friends and acquaintances	
NS6	International entrepreneurial activity contradicts with the culture of my country	
NS7	The role of the entrepreneur with an international vocation in our economy should be more recognized	
NS8	Many people find it hard to accept the figure of an entrepreneur with an international vocation	
NS9	The society, in general, considers that the international entrepreneurial activity is too risky for the value that contributes	
NS10	It is commonly believed that the international entrepreneur has advantages over other entrepreneurs	
NS11	In our university, there is a well-functioning support infrastructure for the start-up of new international companies	
NS12	In my university, you get to meet lots of people with good ideas to start a new international business	

Table 8: Items used for measurement of PBC

PERCEIVED BEHAVIORUAL CONTROL		
Codes	Items	Source
rA1	If I decide to start my own business with an international orientation, I would not know where to start	Autio et al. (2001); Liñán and Chen (2009)
rA4	Creating my own business with an international vocation is too risky	
rA5	I'm sure that I could keep up with the fundamental aspects of my own international business	
A2	If I had the opportunity and the necessary resources, I would create my own company with an international orientation	
A3	I am developing the necessary skills to successfully operate my own business with an international orientation	
A6	Creating a company with an international vocation and keeping it running would be an easy task for me	
A7	I'm ready to start a viable international business	
A8	I can control the process of creating a new international company	
A9	I have the necessary practical knowledge to create a company with an international vocation	
A10	I know how to develop an international business project	
A11	If I tried to start an international firm, I would have a high probability of succeeding	
A12	I think that I could operate successfully a small international business	

Table 9: Items used for measurement of IEI

INTERNATIONAL ENTREPRENEURSHIP INTENTIONS		
Codes	Items	Source
IEI1	I plan to operate my own international business immediately after I graduate	Adapted to “international” intention from Autio et al (2001); Liñán and Chen (2009)
IEI2	I plan to operate my own international business between 5 and 10 years after graduation	
IEI3	I plan to operate my own international business, but it will be when I have ten or more years of professional experience	
IEI4	I am ready to do anything to become an entrepreneur with an international vocation	
IEI5	My professional goal is to become an entrepreneur with an international vocation	
IEI6	I will make every effort to start and run my own company with an international vocation	
IEI7	I am determined to create an international company in the future	
IEI8	I have very seriously thought about creating my own international company	
rIEI9	After finishing the studies, I will intend to work as an employee	
IEI10	After finishing the studies, I will intend to create my own international company	
IEI11	Among the diversity of options for my professional future, I prefer to become an entrepreneur with an international vocation	

In the case of cognitive systems, for the first study Cognitive Style Index-CSI of Allinson and Hayes (1996) was used. In light of the critiques of Hodgkinson and Sadler-Smith (2003). We decided to modify the scale to the 7-point Likert scale. This operationalization allows individuals to declare s/he uses none, one or both cognitive systems in the specific case of international entrepreneurship opportunity behavior. The original scale included 22 items for measuring the analytic system and 16 for the intuitive system. The original scale attributed a 3 if the respondent feels the analytic sentence met his/her cognitive approach, a 2 if unsure, and 0 otherwise. Yet the positive or negative wording strongly influences individuals' perception, as Kahneman and Tversky (1984) showed in the Asian disease game. Accordingly, the wording is kept as it was originally designed, so a high score (7) in an analytic item

means the individual strongly agrees s/he uses the System-C in the context of starting a new international business. Conversely, a high score in an intuitive item means a strong agreement with her/his use of System-X in that situation. In this way, individuals can score high in both, only one or none.

Table 10: Items used for measurement of CSI

COGNITIVE STYLE INDEX		
Codes	Items	Source
I5	I am careful to follow rules and regulations at work.	CSI scale from Allinson and Hayes (1996)
I11	I rarely make 'off the top of the head' decisions.	
I28	I find detailed, methodical work satisfying.	
IR24	I would rather that my life was unpredictable than that it followed a regular pattern.	
IR32	My 'gut feeling' is just as good a basis for decision making as careful analysis.	
IR33	I am the kind of person who casts caution to the wind.	
IR35	I am always prepared to take a gamble.	

Note: due to copyright permission only, items used for results are presented. The scale is available upon request to Emeritus Prof. Chris Allinson at cwa@lubs.leeds.ac.uk and cannot be reproduced.

4.1.2. STATISTICAL METHOD: PARTIAL LEAST SQUARES AND STRUCTURAL EQUATION MODELLING

The data gathered is modelled with a structural equation system by partial least squares since the aim of this thesis is focused on exploring the effect of cognitive systems as antecedents of constructs within the TPB, and due to the lack of a robust theory on these relationships. This type of modelling focuses on maximizing the variance explained, represented by the R-square of the targeted construct (IEI). Further, this procedure is more robust than a variance-covariance based model in conditions of small to medium sample sizes (Chin, 1998). Study 1 was performed by means of SMARTPLS v3.2.7 (Ringle et al., 2018). Moreover, latent variables are reflective measurement scales, i.e. the indicators are highly correlated and interchangeable (Hair et al., 2014). These indicators should be examined in terms of reliability and validity (Hair et al., 2012).

Guadagnoli and Velicer (1988) showed, in their Monte-Carlo analysis, that even small samples produce stable results if the factor loadings are sufficiently large. Therefore, first one should refine the number of items retained in each latent variable, we will validate the scales (see table 11) following Field's (2005) recommendations. We will retain, in each latent variable, items with an item-total correlation above 0.5 and confirm that none of them was more than 0.9.

4.1.3. DATA ADEQUACY, REFLECTIVE OUTER MODEL EVALUATION AND INNER MODEL EVALUATION

The widely used rule of thumb of Chin (1998) states that the sample size should be 10 times largest than one of two possibilities: (1) the block with the largest number of indicators, or (2) the dependent variable with the largest number of independent variables impacting on it. In study 1, the first possibility is equal to 50 (IEI), and the second is equal to 80 (ten multiplied by the number of arrows arriving at IEI). The sample contains 134 cases, so data adequacy is met. Hair et al. (2012) argued that PLS-SEM can process nominal (categorical), ordinal, interval and ratio scaled variables, so it can accommodate the analysis of data.

A bootstrap over 5,000 resamples will be conducted with individual changes in the resampling. The rule to retain reflective indicators is based on outer loadings. Retained items met the minimum threshold of 0.40 (Hair et al., 2014).

All the constructs should exceed the minimum threshold of CR=0.70 for discriminant validity (Bagozzi and Yi, 1988) and the minimum threshold of 0.5 for the AVE as a measure of convergent validity the square root of each latent variable's AVE should be greater than the correlations between the latent variables (Fornell and Larcker, 1981). In addition, the heterotrait-monotrait ratio between latent variables (HTMT) (Henseler et al., 2015) in absolute value should be below the threshold of 0.90 each (see Table 11).

Table 11: Data adequacy, reflective outer model evaluation and inner model evaluation summary

	Recommendation	Source
Data adequacy		
Sample size should be 10 times larger than:	a) the block with the largest number of indicators b) the dependent variable with the largest number of independent variables impacting on it	Chin (1998)
Outer model evaluation		
Outer loadings	Retain items ≥ 0.40	Hair et al. (2014)
Discriminant Validity		
CR	CR ≥ 0.70	Bagozzi and Yi, (1988)
AVE	AVE ≥ 0.50	Fornell and Larcker, (1981)
HTMT	HTMT < 0.90	Henseler et al. (2015)

4.2. QUALITATIVE STUDY-2

In order to provide the explanation for heterogeneous internationalization choices, qualitative data may be even more important than it is in quantitative data, as the purpose of qualitative data is to inform rather than to test the theory (see Glaser and Strauss, 1999). To further address research questions, we interviewed owners of international small ventures. During the semi-structured interviews, owners were asked to reflect on the stages of their internationalization decision-making process. This framework allows me to enquire their cognitive reasoning enactment stage by stage and it revealed certain stressors during the process that may lead SV's to make biased decisions. For the further understanding of the thesis, it is crucial to clarify that a decision outcome is biased when it does not follow the normative process of decision-making or do not consider fully the normative theories of internationalization.

4.2.1. CASE SELECTION AND VARIABLES

While selecting cases, we will use purposeful sampling, which is suitable for studying underexplored phenomena. Cases will be chosen based on theoretical reasoning, regarding replication and theory extension (Yin, 2003). The selection will be based on several criteria that helped describe the managerial IDMP.

First, the cases have to meet the criteria of an SV. We use the European Commission (2003) definition of SVs as firms with fewer than 50 employees, and a total annual turnover or a total balance sheet of less than or equal to 10 million euros.

Second, to investigate the impact of cognitive reasoning we select miscellaneous cases in terms of activities the firm undertook (for variables see Table 12): first international market entry (with respect to firm age) (Laufs and Schwens, 2014); number of foreign markets in which venture is operating in order to identify the speed and acceleration of internationalization (Oviatt and McDougall, 2005); ratio of foreign sales over total sales (Geringer et al. 1989); NACE (CNAE) 2009 classification in order to identify type of the industry in which venture is operating (Rialp et al. 2005; Nadkarni and Barr, 2008; Engelman et al., 2017); internationalization entry mode (Andersen, 1997; Canabal and White, 2008; Zhao et al. 2017). Individual decision maker will be interviewed with respect to overall experience in the industry (Papadopoulos and Martín, 2010); international experience (Reuber and Fischer, 1997; Takeuchi et al., 2005); knowledge of foreign languages, (Aichhorn and Puck, 2017); cognitive reasoning measured by STSS scale (Novak and Hoffman, 2009). and control variables (age -measured as a number of years-, and gender), for complete questionnaires, performed see Appendix 2.

Third, the SV's owner (decision-maker) had to have decided to internationalize and complete the process of internationalization before the interview is conducted but no later than 3 years ago. Thus, managers could recall in their memory how they had performed stage by stage and which factors affected IDMP.

Table 12: Firm and individual level variables criteria

Construct	Definition	Author
Firm-level		
Establishment	Year in which company is established	
Ownership	Type of Ownership	The European Commission, 2003; George et al. (2005)
Employees	Number of employees	The European Commission (2003)
First entry	First international market entry (with respect to firm age)	Laufs and Schwens (2014)
Foreign markets	Number of foreign markets in which venture is operating	Oviatt and McDougall (2005)
Turnover	Total annual turnover	The European Commission (2003)
Foreign sales/total sales	The ratio of foreign sales over total sales	Geringer et al. (1989)
CNAE	National Classification of Economic Activities (2009)	Engelman et al. (2017)
Industry	Type of the industry in which venture is operating	Rialp et al. (2005) Nadkarni and Barr (2008)
Internationalization entry mode	Internationalization entry mode (export, international joint venture, a wholly owned subsidiary)	Andersen (1997); Canabal and White (2008); Zhao et al. (2017)
Manager level		
Experience	Managerial experience in industry at the moment of the interview (years)	Papadopoulos and Martín (2010)
International experience	Managerial international experience (years) at the moment of the interview	Reuber and Fischer (1997); Takeuchi et al (2005)
Pre-experience	Managerial previous experience before starting the company	Takeuchi et al (2005)
Amount of foreign language proficiency	Knowledge of foreign languages (working proficiency) – subjective perception	Aichhorn and Puck (2017)
Cognitive Reasoning	Dual Process theory approach measured by STSS scale	Novak and Hoffman (2009)
Control variables		
Age	n.a.	n.a.
Gender	n.a.	n.a.

4.2.2. DATA COLLECTION

The data were collected through in-depth, personal semi-structured interviews conducted between May and November 2017. A sample of the main questions asked during the interviews is provided in Appendix 2. Total of 14 companies was interviewed, out of which 2 companies were tested as a pilot in order to clarify the questions and improve the questionnaire. The duration of interview varied between 40 and 90 minutes. The interviewees were checked to be the decision-maker of the venture's international expansion - essentially, owners or managers responsible for internationalization decisions. Upon completing semi-structured interviews, the managers were asked to fill Situation Specific Thinking Style Scale (STSS), which represents the situation-specific thinking style or need for cognition with a previously validated questionnaire created by Novak and Hoffman (2009). The scale provides ten assessments to assess the use of the experiential cognitive reasoning and another ten for analytical cognitive reasoning. Among the variety of scales reported in the meta-analysis of Phillips et al. (2016), the STSS is task-specific so that interviewee responds to the scale specifically for the task of *'making internationalization decisions'*.

The interviews were digitally recorded and then transcribed in a word processor. All the interviews were transcribed within 24 hours after each interview. Before conducting the main interviews, we carried out two interviews with two different managers in two other companies as a pre-test, although no changes should be made. After data analysis and coding, we distinguished the codes that were already present in the previous literature review from the new codes that emerged in the process of systematic analysis of transcripts. Since no new themes arise in the following section we address respectively total of 6 companies which meets the merit of saturation point. This reasoning is guided by recommendation of grounding theory approach. Tables 13 and 14 give details of the guidance to will be used for defining the cognitive reasoning codes.

Table 13: Overview of the previously established guidance for defining the experiential cognitive reasoning codes supplemented with new codes that emerged in the process of systematic analysis of transcripts

CONTEXTUAL CODES	ASSOCIATIVE THINKING	REASONING	SPEED OF DECISION-MAKING	KNOWLEDGE & LEARNING	COGNITIVE LOAD EFFORT	CONSCIOUSNESS	BIASES
EXPERIENTIAL	<p>Holistic: prefers solving problems by looking at the whole, and then approaching the problem through patterns using hunches¹;</p> <p>Associationistic connections ^{2,3,4,7};</p> <p>Behavior mediated by "vibes" from past experiences^{2,7}</p> <p>Prefers management situations that are unstructured, fluid and spontaneous¹</p>	<p>Pragmatic⁶;</p> <p>Resistant to change⁶;</p> <p>Encodes reality in specific images, metaphors, and narratives based on experience²</p>	<p>Faster operating⁴</p> <p>Automatic⁵</p> <p>Oriented to immediate action⁶</p> <p>Default process ⁵</p>	<p>Slow-Learning: since it is unconscious thinking, it takes more time to realize why it reaches certain conclusion^{3,4}</p> <p>Changes slowly with intense experience ⁶</p> <p>Relies more on implicit knowledge to reach a conclusion⁷</p>	<p>Low effort⁵ or even effortless⁶</p> <p>Unlimited in capacity and creativity⁵</p>	<p>Non-reflective consciousness ⁴</p> <p>Unconscious ⁷</p>	<p>Emotional bias: relies more on feelings to make a decision¹</p> <p>Self-evidently valid: "Experiencing is believing"⁶</p> <p>Slower to learn and more resistant to change: trust on initial choice despite hard evidence⁶</p> <p>More prone to biased responses ⁷</p>

Source: 1: Agor (1984); 2: Epstein (1994); 3: Kahneman (2003); 4: Sadler-Smith and Shefy (2007); 5: Evans (2008); 6: Hodgkinson et al (2009); 7: Evans and Stanovich (2013)

Table 14: Overview of the previously established guidance for defining the rational cognitive reasoning codes supplemented with new codes that emerged in the process of systematic analysis of transcripts

CONTEXTUAL CODES	ASSOCIATIVE THINKING	REASONING	SPEED OF DECISION-MAKING	KNOWLEDGE & LEARNING	COGNITIVE LOAD EFFORT	CONSCIOUSNESS	BIASES
RATIONAL	<p>Detailed: prefers solving problems by breaking them into parts than approaching the problem sequentially using logic.¹</p> <p>Prefers management situations that are well structured and can be carefully planned.¹</p>	<p>Deductive¹</p> <p>Analytic^{2,5}</p> <p>Logical^{2,5}</p> <p>Flexible³</p> <p>Neutral³</p> <p>Normative (rational) responses⁷</p>	<p>Slower, controlled and path sequentprocessing⁶</p> <p>Oriented to delayed action^{2,4,5,6,7}</p>	<p>Relies more on explicit knowledge to reach a conclusion⁷</p> <p>Changes more rapidly with the strength of arguments⁶</p>	<p>Entails a certain amount of cognitive load⁴</p> <p>Limited and constrained in capacity since it consumes time and requires high cognitive load⁵</p>	<p>Reflective⁶</p> <p>Experienced actively and consciously: We are in control of our thoughts²</p>	<p>Rule-Governed²</p> <p>Rule-based⁵: do not trust on intuitive, holistic findings</p> <p>Requires justification via logic and evidence “paralysis by analysis”.</p>

1: Agor (1984); 2: Epstein (1994); 3: Kahneman (2003); 4) Sadler-Smith and Shefy (2007); 5: Evans (2008); 6: Hodgkinson et al (2009); 7: Evans and Stanovich (2013)

Following a triangulation check, additional information beyond the interviews will be conducted with informants from companies to verify the validity of the data and for follow-up purposes. In addition, we will consult the websites of the companies to obtain information about their internationalization histories, products, and other related secondary materials. Moreover, we have studied the companies' archival documents, such as company bulletins, and the key informants will be asked to evaluate the comprehensiveness of the data.

The financial information will be gathered from the SABI database and by asking owners when data is still unavailable in the database. SABI is compiled by Bureau van Dijk and collects data from national Public Company Registry. The last year available in SABI database is 2016 at the date of consultation. Only ventures that had international activity through exporting or other modes will be selected as candidates and contacted based on interviewees availability.

4.2.3. METHODS FOR DATA ANALYSIS

The study 2 employs certain features of *abduction*, in which authors move back and forth by combining deduction and induction (Dubois and Gadde, 2002). This is because data, in the form of qualitative interviews, will be collected to explore a phenomenon, recognise themes and explain heterogeneous internationalization patterns to supplement the extant theory (Suddaby, 2006). Even though the grounded theory approaches (based on inductive methods) are often used in case study research, their application must be free of existing theoretical inferences and influence (Gioia et al., 2013). To further explore and develop the framework, we will compare SV's to study whether the manager's cognitive reasoning affected the internationalization decision-making pattern. The study performed is supported by internationalization theory and former psychological constructs, such that mine observations and analysis are explicitly designed to address the underexplored relationships of individual cognition with internationalization decision-making. Therefore, applied analytical method complies with an abductive and not grounded theory approach only. Although we will follow grounded theory's established methodological heuristics of iterative coding

and extensive memo writing to address internal validity, as addressed in table 15 (Gehman et al., 2017).

Accordingly, and following Eisenhardt and Graebner (2007) recommendation, we use multiple case studies to develop and reconnect these theoretical links. The logic behind the use of multiple cases is based on whether results can be replicated among cases (Saunders et al., 2015). The purpose of semi-structured questions is to follow the approach of wording, which can be considered as an indicator of cognitive reasoning (Fiol and Huff, 1992).

Interview transcripts will be analysed and coded in a three-stage procedure (Table 15). In the first stage of '*unitizing*', we should become familiar with the data by reading and re-reading the transcripts to identify individual '*thought units*' (Gioia and Sims, 1986). Thought units could range from a phrase, through a complete sentence, to several sentences and are deployed to capture a complete thought or idea relevant to the research aims. Once thought units are identified, we systematically analyse these to uncover dimension sub-processes from the interview data in accordance with qualitative procedures (Corbin and Strauss, 2014). In the second stage of '*categorizing*', statements relating to similar categories should be grouped into preliminary concepts and assigned with the descriptive labels (i.e. sub-processes). This process continues until the point of saturation is reached and every relevant thought unit is assigned to an aggregate dimension. In Chapter 5, we identify relevant illustrative quotes from the interviews relating to the addressed research question in performed study 2.

Table 15: Data Structure

First-order theme	Second-order theme	Aggregate dimensions
Statements regarding the initial ideas steaming from experience, observation, association with the environment.	Perception	Decision Making Process
Statements indicating creating a battery of options	Options creation	
Statements showing wheatear decision makers evaluated and to which extend the evaluation was carried out rapid or slow.	Evaluation of selected option	
Statements regarding the final decision made concerning the internationalization pattern features (i.e. entry mode, commitment, host country...)	Final choice	
Statements showing awareness of potential shortcomings in past decision and potential improvements in previous phases.	Learning phase	Feedback
Statements in line with codes defined by previous researchers in Table 13 regarding expertise is driven unconscious internationalization decision-making process.	Experiential reasoning	Cognitive Reasoning
Statements in line with codes defined in Table 14 regarding rationally driven conscious internationalization decision-making process.	Rational reasoning	
Statements showing uncertainty awareness as well the influence of the uncertainty perception on internationalization decision-making process	Uncertainty awareness	Stressors of the internationalization
Statements showing risk perception influence on the internationalization decision-making process	Risk perception	
Expressions regarding the past, current and future state of the domestic and foreign environment in line with firm-specific advantages.	Perceived features of the environment and firm-specific advantages (FSA)	
Statements regarding the perception of time during the internationalization decision-making process, duration of the process itself.	Time perception	

CHAPTER 5: RESULTS OF THE EMPIRICAL CONTRAST

RESEARCH SCOPE	THE ROLE OF MANAGERIAL COGNITIVE REASONING ON THE INTERNATIONALIZATION DECISION-MAKING OF SMALL VENTURES
CHAPTER 1.	INTRODUCTION, OBJECTIVES, JUSTIFICATION AND STRUCTURE OF RESEARCH
CHAPTER 2.	LITERATURE BACKGROUND: COGNITIVE REASONING SUPPLEMENT TO THE PROCESS OF INTERNATIONALIZATION
CHAPTER 3.	PROBLEM, HYPOTHESES AND INVESTIGATION MODEL
CHAPTER 4.	METHODOLOGY FOR THE EMPIRICAL CONTRAST
CHAPTER 5.	RESULTS OF THE EMPIRICAL CONTRAST <ul style="list-style-type: none">5.1. Quantitative study<ul style="list-style-type: none">5.1.1. Exploratory factor analysis5.1.2. Confirmatory factor analysis5.1.3. The impact of cognitive reasoning on international entrepreneurship5.2. Qualitative study<ul style="list-style-type: none">5.2.1. Managerial cognitive reasoning role on internationalization decision-making5.2.2. Managerial cognitive reasoning biases5.2.3. Learning feedback loop5.2.4. Stressors of internationalization decision-making5.3. Overall hypotheses accepted/rejected
CHAPTER 6.	DISCUSSION OF THE RESULTS
CHAPTER 7.	CONCLUSION

CHAPTER 5. RESULTS OF THE EMPIRICAL CONTRAST

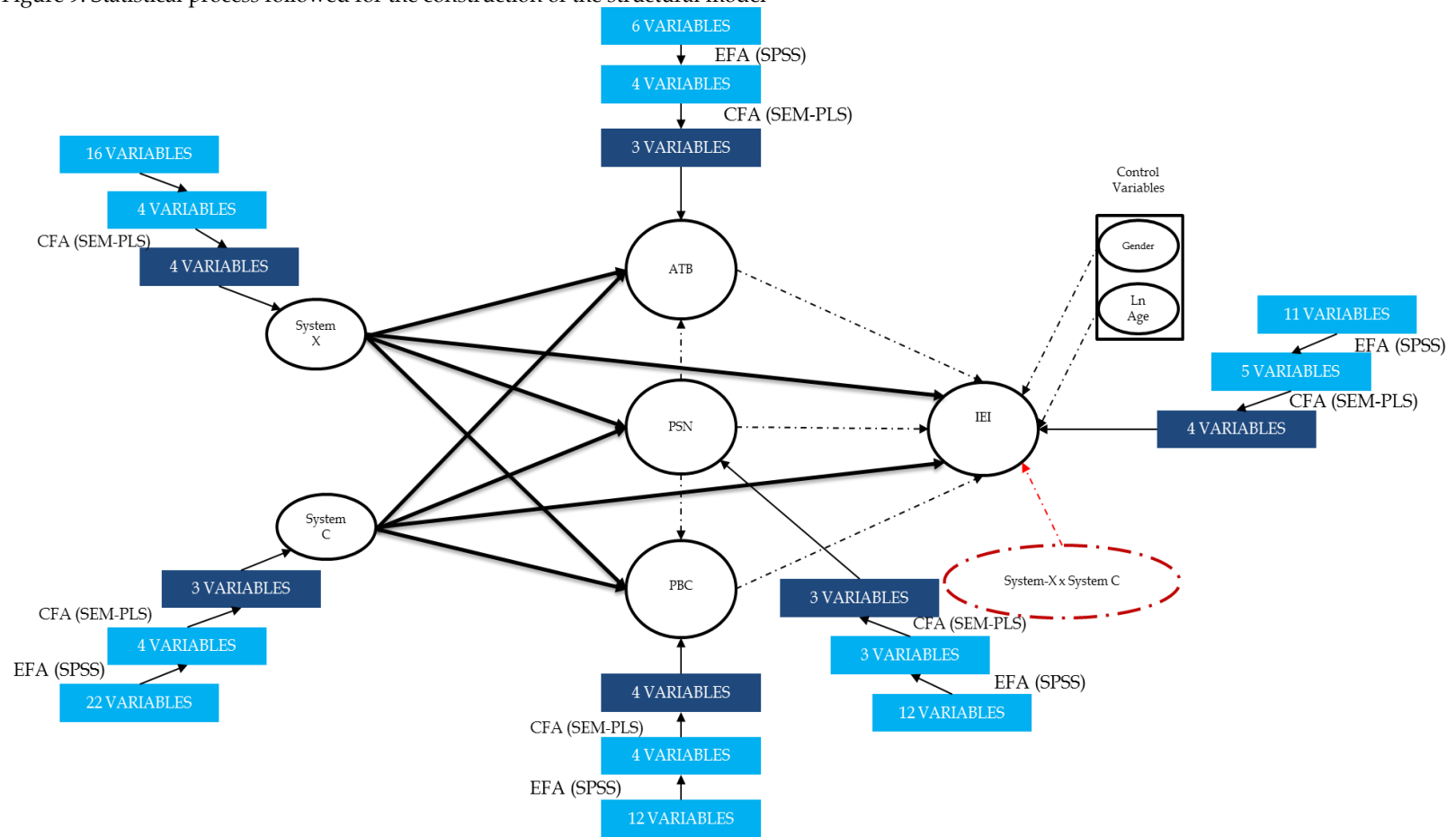
5.1. QUANTITATIVE STUDY-1

Future entrepreneurs' responses were collected through the questionnaires. The questionnaire was codified with the help of the statistical program SPSS 20.0. Prior to the analysis of the data, we proceeded to detect and correct possible errors in its tabulation and thus guarantee the quality of the data. For the empirical contrast, modeling has been used as a working instrument through a System of Structural Equations-SEM (also called covariance structure models). With it, the relationship between the observable variables and the latent variables of the model are defined, measuring relations and specifying which latent variables directly or indirectly influence. The synthetic process for Study 1 is presented in Figure 9.

The reasoning behind the statistical software PLS-SEM v3.2.7 use lays in its usage of the variances-covariances structure. PLS-SEM is a statistical technique that is more oriented to the estimation of the parameters and not to the prediction (Barroso Castro et al., 2007: 3). Unlike the multiple regression techniques, the SEM is the only one that allows to simultaneously examine a series of dependency relationships while also analysing multiple dependent variables simultaneously (Jöreskog and Sörbom, 1999; Shook et al., 2004: 397). The Partial Least Squares-PLS technique is less demanding in the distribution of the variables of the sample, the type of variables and the size of the sample itself (Barroso Castro et al., 2007: 1). According to these authors, as a conclusion of a detailed study on the differences in the application and results of both techniques (SEM and PLS), they observed that the first one tries to minimize the discrepancies between the initial empirical matrix of covariance data and the covariance matrix deduced from the model and the estimated parameters. The second one (PLS) tries to maximize the explained variance (R^2) of the dependent variables, which leads to the fact that the parameter estimates are based on the ability to minimize the residual variances of the endogenous variables.

In the first phase, an Exploratory Factorial Analysis is carried out with the purpose of determining which directly observable variables contribute to measuring each of the latent variables or constructs included in the model. For the purpose of identifying which observable variables are loaded in each of the latent variables of the model. Next, from the result obtained in this exploratory factor analysis, the unnecessary observable variables are eliminated and kept only those that do help to measure any latent variables of the model.

Figure 9: Statistical process followed for the construction of the structural model



Source: own draft

5.1.1. EXPLORATORY FACTOR ANALYSIS

Results of the exploratory factor analysis are presented in Table 16. Overall retained items are based on communalities extracted. Extraction is based on principal components method with an eigenvalue greater than 1 and maximum iterations for convergence equal to 25 (unrotated factor solution). This method of extraction is adequate when the objective is to summarize most of the original information (variance) in a minimum number of factors, with prediction purposes (Hair et al., 1999: 91). Moreover, is applied varimax method with maximum iterations for convergence equal to 30. As shown in Table 16 all variables meet the Kaiser-Meyer-Olkin test with meeting the KMO criteria between 0,5 and 1 (Kaiser, 1958). Furthermore, Bartlett's test verifies the that the correlation matrix is an identity matrix, which would imply that its intercorrelations are 0. This means that the variables are intercorrelated is favourable to proceed with factor analysis. This information is very useful in case of small sample size. Moreover, total variance explained meet the criteria of being higher than 0,5 (Hair et al., 1999: 639).

Table 16: Exploratory factor analysis results (SPSS)

Variable	Items	Communalities Extracted	Total Variance explained (Principal Component)	KMO and Bartlett's test	Sample size
System C	I11	0,555	50,354 %	KMO = 0.730 Approx. Chi Sq. = 71.885 Df = 6 Sig. = 0.000	134
	I22	0,459			
	I28	0,552			
	I5	0,447			
System X	IR33	0,459	51,858 %	KMO = 0.714 Approx. Chi Sq. = 85,392 Df = 6 Sig. = 0.000	
	IR32	0,545			
	IR24	0,649			
	IR35	0,421			
PBC	A3	0,658	73.121%	KMO = 0.806 Approx. Chi Sq. = 277.459 Df = 6 Sig. = 0.000	
	A8	0,723			
	A9	0,781			
	A10	0,762			
PSN	NS5	0,753	61,015 %	KMO = 0.574 Approx. Chi Sq. = 85,331 Df = 3 Sig. = 0.000	
	NS4	0,756			
	NS10	0,321			
ATB	AHA3	0,539	59,519 %	KMO = 0.696 Approx. Chi Sq. = 176,229	
	AHA5	0,783			

Variable	Items	Communalities Extracted	Total Variance explained (Principal Component)	KMO and Bartlett's test	Sample size
	AHA6	0,732		Df = 6	
	AHA4	0,327		Sig. = 0.000	
IEI	IEI4	0,707	76,711%	KMO = 0.900	
	IEI5	0,805		Approx. Chi Sq. = 480,508	
	IEI7	0,760		Df = 10	
	IEI10	0,746		Sig. = 0.000	
	IEI6	0,818			

5.1.2. CONFIRMATORY FACTOR ANALYSIS

Upon the identification of items through the Exploratory Factor Analysis, the following step is carried out by SEM-PLS v3.2.7 and adoption of a rule that retained items must meet the minimum threshold of 0.40 (Hair et al., 2014). This step caused the removal of additional items which is shown in detail in Table 17.

Table 17: Confirmatory Factor Analysis (SEM-PLS)

Variable	Items	Factor Loadings	Items retained
System C	I11	0,821	I11
	I22	>0,9	-
	I28	0,751	I28
	I5	0,687	I5
System X	IR33	0,716	IR33
	IR32	0,637	IR32
	IR24	0,714	IR24
	IR35	0,761	IR35
PBC	A3	0,836	A3
	A8	0,859	A8
	A9	0,864	A9
	A10	0,858	A10
PSN	NS5	0,820	NS5
	NS4	0,805	NS4
	NS10	0,695	NS10
ATB	AHA3	0,723	AHA3
	AHA5	>0,9	-
	AHA6	0,874	AHA6
	AHA4	0,523	AHA4
IEI	IEI4	0,848	IEI4

Variable	Items	Factor Loadings	Items retained
	IEI5	0,898	IEI5
	IEI7	0,883	IEI7
	IEI10	0,872	IEI10
	IEI6	>0,9	-

Overall results of the retained item used in the final model are shown in After this step, 3 items in ATB, 3 in PSN, 4 in PBC, 4 in IEI, 4 in System-X and 3 in System-C were retained as shown in Table 18.

Table 18: Summary of EFA and CFA analysis

Construct	# items in the original scale	# items retained after EFA	Communalities Extracted (SPSS)	# items retained after CFA	Factor Loadings (SEM-PLS)
ATB	6	4	AHA3 0,539	3	AHA3 0,723
			AHA5 0,783		AHA5 >0,9
			AHA6 0,732		AHA6 0,874
			AHA4 0,327		AHA4 0,523
PSN	12	3	NS5 0,753	3	NS5 0,820
			NS4 0,756		NS4 0,805
			NS10 0,321		NS10 0,695
PBC	12	4	A3 0,658	4	A3 0,836
			A8 0,723		A8 0,859
			A9 0,781		A9 0,864
			A10 0,762		A10 0,858
IEI	11	5	IEI4 0,707	4	IEI4 0,848
			IEI5 0,805		IEI5 0,898
			IEI7 0,760		IEI7 0,883
			IEI10 0,746		IEI10 0,872
			IEI6 0,818		IEI6 >0,9
System-X	16	4	IR33 0,459	4	IR33 0,716
			IR32 0,545		IR32 0,637
			IR24 0,649		IR24 0,714
			IR35 0,421		IR35 0,761
System-C	22	4	I11 0,555	3	I11 0,821
			I22 0,459		I22 >0,9
			I28 0,552		I28 0,751
			I5 0,447		I5 0,687
Control Variables					
Age		n.a.		n.a.	
Gender	Dummy variable	n.a.		n.a.	

5.1.3. THE IMPACT OF COGNITIVE REASONING ON INTERNATIONAL ENTREPRENEURSHIP

Following steps from Chapter 4, all the constructs exceeded the minimum threshold of CR=0.70 for discriminant validity and the minimum threshold of 0.5 for the AVE as a measure of convergent validity (see table 19). The square root of each latent variable's AVE is greater than the correlations between the latent variables (Fornell and Larcker, 1981), therefore requisite is met. In addition, the heterotrait-monotrait ratio between latent variables (HTMT) (Henseler et al., 2015) in absolute value was below the threshold of 0.90 each. Accordingly, the discriminant validity has been established between all the pairs of constructs.

Table 19: Descriptive statistics and correlation matrix

Latent constructs	Mean (*)	SD	Quality criteria		Square root of the AVE (Latent) & Correlations Matrix						
			CR	AVE	1	2	3	4	5	6	
1. ATB	4.04	1.10	0.79	0.56	0.75						
2. IEI	2.70	1.02	0.92	0.76	0.70	0.88					
3. PBC	3.01	0.84	0.91	0.72	0.48	0.76	0.85				
4. PSN	4.26	0.55	0.81	0.59	0.34	0.28	0.15	0.77			
5. System-C	4.25	0.73	0.79	0.57	0.06	0.12	0.16	0.29	0.75		
6. System-X	3.58	0.67	0.80	0.50	0.34	0.34	0.25	0.10	0.20	0.71	
7. Ln age	3.85	0.13	n.a.	n.a.	0.18	0.12	0.11	0.10	0.07	0.05	
8. Gender	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

(*) Mean, the average score for all the items included in this construct; SD=standard deviation; CR=composite reliability; AVE=average variance extracted; The italic numbers on the diagonal are the square root of the AVE. Off-diagonal values are correlations among constructs/variables; n.a.=not applicable (single-item or categorical variable)

Interpreting the results from Table 19. it is evident that future entrepreneurs hold few international entrepreneurial intentions and they perceived a low degree of behavioral control (average IEI: 2.70, s.d. 1.20; average PBC 3.01, s.d. 0.84; scales ranging from 1 to 7). The level of perceived social referents and their attitude to the behavior is close to the neutral point of the scale (4). The surveyed students declared that they use more their System-C (4.25; s.d. 0.73) than their System-X (3.58; s.d. 0.67), since the 95% confidence

intervals do not overlap – bootstrapping of 5000 resamples, CI5-CI95: System-C: (4.12-4.37) and System-X: (3.46-3.69).

Table 20 summarizes the results of the regressions performed by bootstrapping of 5000 resamples in the latent modelling. The TPB framework in addition to the cognitive systems and control variables (gender and age) explained the 73% of the variance of the IEI.

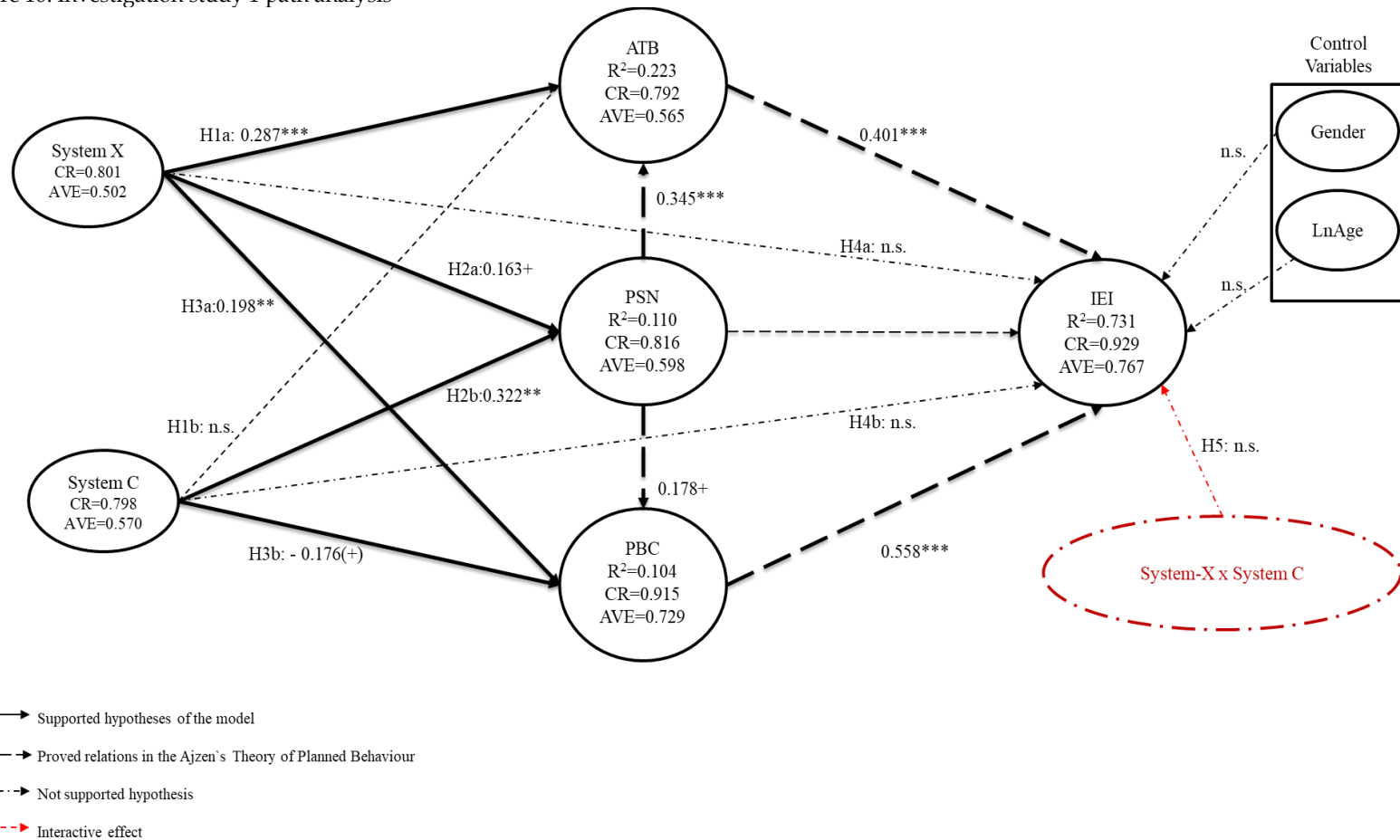
Table 20: Results of the regression analyses

Hypothesis tested	Unstandardized path estimates	R-square
H1a System-X →ATB	0.287***	
H1b System-C →ATB	-0.106 n.s.	0.223
TPB PSN→ATB	0.345***	
H2a System-X →PSN	0.163+	0.110
H2b System-C →PSN	0.322***	
H3a System-X →PBC	0.198**	
H3b System-C →PBC	-0.176+	0.104
TPB PSN→PBC	0.178+	
H4a System-X →IEI	0.066 n.s.	
H4b System-C →IEI	-0.004 n.s.	
TPB ATB→IEI	0.401***	
TPB PSN→IEI	0.056 n.s.	0.731
TPB PBC→IEI	0.558***	
Control var. Ln Age→IEI	-0.019 n.s.	
Control var. Gender →IEI	-0.060 n.s.	
H5a & H5b System-X * System-C→IEI	0.034 n.s.	

TPB: relations already tested in the Theory of Planned Behavior; Bootstrapping of 5000 samples. Significant thresholds are based on a one-tailed T-test: *** significant at p-values < 0.001; ** significant at p-values < 0.005; * significant at p-values < 0.010; + significant at p-values < 0.050

ATB's variability is essentially explained by PSN (0.34) and System-X (0.28), while System-C is not significant. Furthermore, the latter System is positively related to PSN (0.32), System-X also explained PSN (0.16). Both Systems affect the PBC, although with an opposite sign: there is a significant positive impact of System-X on PBC (0.19) and a significant negative effect of System-C on PBC (-0.17). The impact of these variables on IEI is significant for PBC (0.55) and ATB (0.40) while gender and LnAge showed no significance within the sample. Neither of the Systems has a significant direct impact on IEI. Significant relations and path analysis are depicted in Figure 10.

Figure 10: Investigation study 1 path analysis



Note: t-values thresholds at one-tailed test of alpha=0.05 and 5000 resamples: +t (0.050, 4999) = 1.645; *t (0.010, 4999) = 2.327; **t (0.005, 4999) = 2.57; ***t (0.001, 4999) = 3.091

Results obtained within the framework of study 1, are consistent with most studies conducted among university students and the general construct of entrepreneurial intention. The meta-analytic regression of Haus et al. (2013) included a comparison of samples of entrepreneurs versus university students. They found that the impacts among students are lower [higher] for ATB (0.21 vs 0.30) [PBC, 0.37 vs 0.18] than for the general sample of entrepreneurs. Meanwhile, PSN is very similar to the latter and with a low impact (0.14). Comparatively, and considering that we are dealing with the impact on starting a new venture internationally, the estimate for PBC (0.55) is also higher than for ATB (0.40). Yet the impacts on IEI are higher than for the case of EI. Other studies found a wide variety of results. Aloulou et al. (2016) estimated 0.22 for ATB, 0.28 for PSN and 0.28 for PBC; Castellano et al. (2014) results are 0.55 for ATB and 0.17 for PBC, while it seems that PSN was non-significant; Autio et al. (2001) estimated 0.24 for ATB, close to non-significant for PSN (0.03) and 0.32 for PBC. In addition, the variance explained by is larger than the usual TPB applied to university students (0.33 in the case of Aloulou et al., 2016; 0.44 in Castellano et al., 2014; 0.36 in the case of Autio et al., 2011). Obtained results are comparable to the Liñán and Chen (2009) estimates for the Spanish sample: 0.67 for ATB-EI, 0.17 for PBC-EI and non-significant for PSN-EI. Garcia-Rodríguez et al. (2016) found that ATB impacted positively on EI in another sample of Spanish university students (0.85), while they found no significant relationship from PSN and PBC to EI. Therefore, obtained results suggest that the inclusion of the cognitive approach adds significant information to explain the variability of the specific case of IEI. This is even more relevant in a context of low intentions (IEI mean 2.7 in a 1-7 scale). The lack of significance of the impact PSN has on IEI is consistent with Sommer's (2010) findings, and with the overall idea that PSN loses its relevance in certain settings (Krueger et al., 2000), such as IEI among university students when the social setting offers low supportive referents. Furthermore, the lack of IEI within the sample could be explained on findings of Iakovleva and colleagues (2014) by which individuals from developed countries might be more risk-averse in general (influence on both systems since is general reasoning which plays role in PSN that are having direct role on ATB and PBC, which are impactful on IEI), therefore may actually have more to lose when starting business, and even more when starting international business.

The further light on the effects of cognitive systems on IEI in terms of total and indirect effects, in addition to the direct (path parameter estimate) effect that is already considered in Table 21. The total effect of System-X on IEI is positive (0.34), with a significant indirect effect (0.27). The indirect path reaches IEI through the mediation effect on ATB and PBC. Conversely, none effect of System-C is significant which could be caused

by opposite effects of PSN to PBC and PSN. Finally, PSN exerts an indirect effect on IEI through its relationship with ATB and PBC.

Table 21: Total, Direct, and Indirect effects

	on IEI	Total effect	Direct effect	Indirect effect
System-X		0.340***	0.066 n.s.	0.274***
System-C		-0.050 n.s.	-0.004 n.s.	-0.046 n.s.
PSN		0.294***	0.056 n.s.	0.238***
On ATB				
System-X		0.344***	0.287***	0.057 n.s.
System-C		0.005 n.s.	-0.106 n.s.	0.111*
On PBC				
System-X		0.227**	0.198**	0.029 n.s.
System-C		-0.119n.s.	-0.176+	0.057+

Note: t-values thresholds at one-tailed test of alpha=0.05 and 5000 resamples: +t (0.050, 4999) = 1.645; *t (0.010, 4999) = 2.327; **t (0.005, 4999) = 2,57; ***t (0.001, 4999) = 3.091

5.2. QUALITATIVE STUDY-2

Following previously defined guidelines in Chapter 4, we applied the SV's definition for selecting the companies to be interviewed, particularly in high velocity and knowledge intensive industry. For defining the industry velocity, we adopted the approach of Nadkarni and Barr (2008), in which the industry velocity is characterised by knowledge intensity, manufacturing intensity, the complexity of supply chain, and technology intensity (high-tech versus low-tech). This perspective allowed me to conduct research among online retailer, computer software, toys, and games.

I selected five cases, companies A, B, C, D, and E which are based in Spain and a sixth company F which is based in Hungary (see Table 21 and 22). The motivation for selecting Hungarian based company was to test whether new things arise under different cultural and environmental circumstances while all other variables were controlled. All

owners/companies agreed to share their financial data except the company B, which we noted in Table 18.

Following methodology guidelines of grounded theory approach, we identified the impact of cognitive reasoning on internationalization decision-making. we start by examining the managerial perception and options stages. After that, we reflect on the stage of evaluation that leads to the final choice. In the process, we check for language markers (though units) to assess how and the extent to what the outcome of each stage is the results of each of the two-cognitive reasoning. we then assess the extent to which they are influenced by their previous experience (feedback loop). Finally, we explain the cognitive effect on identified stressors of internationalization (i.e. uncertainty awareness, risk perception, perceived features of the environment and firm-specific advantages, competition and time pressure) and the possible impact on the internationalization pace. Additionally, we include the results of the STSS test within the text. STSS score is used as a reflection of how the manager's cognitive reasoning approach influenced the internationalization decision-making process.

Table 22: Details of the selected companies' features

	Company A	Company B	Company C	Company D	Company E	Company F
Establishment	2016	2013	2001	2000	1985	2014
Ownership	Ltd.	Ltd.	Ltd.	Ltd.	Ltd.	Ltd.
Number of employees	2	2	3	7	29	2
First entry	2016	2014	2003	2005	2001	2016
Foreign markets	5	3	16	3	8	13
Turnover	3.000	Confidential	1.933.842	286.616	1.783.272	17.000
Foreign sales/ total sales	90%	20%	10 %	15%	17 %	40%
	3240	6209	4651	6209	6201	6201
CNAE(Industry)	Toy Production	Services related to information technology	Wholesale of computers, computer peripheral equipment, and software	Services related to information technology	Computer programming activates	Computer programming activities
Internationalization entry mode	Export	Export	Export	Export	Export	Export

Table 23: Details of the selected owners' features

	Manager A	Manager B	Manager C	Manager D	Manager E	Manager F
Experience	14	4	17	28	50	10
International experience	1	3	15	28	16	4
Pre-experience	0	0	0	17	0	4
Amount of foreign languages proficiency	2	4	2	6	4	3
Cognitive Reasoning	Experiential (54) >Rational (44)	Experiential (69) >Rational (22)	Experiential (68) >Rational (42)	Experiential (44) <Rational (51)	Experiential (28) <Rational (40)	Experiential (46) >Rational (33)
Gender	Male	Female	Male	Male	Male	Male

5.2.1. MANAGERIAL COGNITIVE REASONING ROLE ON INTERNATIONALIZATION DECISION-MAKING

As previously identified one of the main features of internationalization decision-making is the experiential cognition. Identification of experiential cognition is sometimes difficult to be split, between some of the stages of decision-making, because it tends to yield immediate choices. Moreover, it is also difficult to separate perception and options since the former is instantaneous and it yields options immediately (i.e. very quick process). Therefore, we left that separation in Table 23 with a dashed line. Next, for each comment illustrating the results, we included the stage of the decision-making process and the type of cognitive reasoning between brackets [Stage, type of reasoning].

To facilitate the comparisons between the managers cognitive reasoning, the representative data is divided into two groups according to the cognitive reasoning. In the Novak and Hoffman's (2009) study, they asked participants to score the use of both cognitive reasoning and checked its correspondence with the task -whether it was a rational or an experiential task. The benchmarks for rational tasks was that individuals scored on average between 72 and 84 on 100 in the rational scale, and it did between 71 and 58 for experiential scale. When the task was experiential, on average individuals scored between 49 and 67 on the rational scale and between 72 and 80 on the experiential scale. According to these benchmarks and depending upon whether the individual scored higher in one than in the other scale, we categorize managers as experiential reasoning and rational reasoning when approaching the decisions on internationalization.

Table 24: Decision making process, sub-processes, and representative data

Aggregate dimensions	Sub-processes	Representative data (Thought units)		
		Manager	Experiential	Rational
Decision making process	Perception	A	"I already knew how to sell it, how to export..."	
		B	"I just felt like that plus there is a lot of demand and not a lot of supply..."	
		C	"In this particular case when I was in the hospital (my wife was giving birth to our son) I got an idea thinking about there was so much demand for the product there and I had a good price..."	
		D	"I saw that the service that I provide here I can provide there as well..." "First, I identify <i>IF</i> . I believe that experience allows me to perceive certain signs and patterns which I do recognize from before."	
		E	"I am a perfect person to foresee big things in the future, and I have this because of my experience. I already knew that there was a gap in a potentially very interesting market..."	
		F	"I knew that there was a huge demand, and there was practically nothing over there, so we just started telling them what we could offer"	

Aggregate dimensions	Sub-processes	Representative data (Thought units)		
		Manager	Experiential	Rational
	Options creation	A	"...I went directly to the market that I wanted, and I thought of the mediator from the first moment..."	
		B	"Since I already had the company I went to live in Thailand, so I did not consider options other than Thailand..."	
		C	"...at that moment no alternatives were considered..."	
		D	"It was more an initial opportunity because I lived in Belgium for a long time and always had an idea of the global market, but it was never our priority..."	"...then I started saying that this could be a good direction..."
		E	"Small companies have the same need as big ones, but we don't have economic capacity..."	"... therefore, I decided to attract and work well with multinationals in the domestic market that can help me enter the international market"
		F	"I knew that they started investing a lot in that market, so we focused on going with them to that particular market..."	
	Evaluation of selected option	A	"I already knew the means to launch it and the market"	"Looking at the statistics of distributors, from the data I had available..."

Aggregate dimensions	Sub-processes	Representative data (Thought units)		
		Manager	Experiential	Rational
			"It was zero risk, we already knew the market"	
		B	"It was not anything planned, it was not a planned goal, it was an adventure..."	"...since overall evaluation lasted for days..."
		C	"I used my imagination...sometimes you have to just throw ahead instead of evaluating alternatives..."	"I did some market research..."
		D		"I contrast experience with knowledge. I make inquiries in the market by checking what competitors were doing"
		E		"...a careful evaluation of the information is something I always do after the instinct is provoked, little by little I support the idea by data, data, and more data. This sometimes can take a year or a bit more..."
		F	"...no assessment needed to be made..."	"We started calculating subcategories of 2 million users and creating our pool of users that would

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Aggregate dimensions	Sub-processes	Representative data (Thought units)		
		Manager	Experiential	Rational
				be willing to pay the price..."

Aggregate dimensions	Sub-processes	Representative data (Thought units)		
		Manager	Experiential	Rational
	Final choice	A	"It's the best mediator to reach the market I wanted..."	
		B	"The decision is already inside me, I don't have to analyse it..."	...for a long period of time"
		C	"I could not answer how exactly I made the decision, over the course of the day many things crossed my mind. Suddenly I started up a foreign company there..."	
		D	"...this is the moment when heart enters by saying that this could be a good opportunity..."	
		E	"The final choice I made was a candidate company that was able to offer us services and it was only 120 kilometers away from our headquarters..."	
		F	"We would need this international market to get certificated and to stay alive"	

Aggregate dimensions	Sub-processes	Representative data (Thought units)		
		Manager	Experiential	Rational
Learning phase	Feedback	A		"After I went to the market I wanted, then I realized there were small ramifications...."
		B		"Decision is made within one hour, then I analyse it, but the decision is already made because in worst case scenario I am very easy to adapt..."
		C		"Whatever is a problem it is easily achievable, I do extra market research and get to the point I want..."
		D		"...I checked if it was a good decision because I try to analyse where I am now and analyse what I have as well what I am going to do in the future..."
		E		"We can improve much more especially regarding the reactions to the market and actions were taken"

Aggregate dimensions	Sub-processes	Representative data (Thought units)		
		Manager	Experiential	Rational
		F		"We needed to modify our portfolio to serve that international market"
Representative data (Thought units)				
Stressors of internationalization	Uncertainty awareness	A	"I don't think about the uncertainty"	
		B	"I live in uncertainty without a stable and fixed job, it also every day for me...."	
		C	"Uncertainty for me is one of the two sides of the coin..."	
		D	"I believe that today we live in total uncertainty but for me, uncertainty is just a risk parameter."	
		E	"I think that uncertainty is small since I already know who and what I am..."	
		F	"Uncertainty is also a risk, but it can be positive, it can have both effects, anything"	
	Risk perception	A	"I do think about the risk"	
		B	"Taking risk is part of day to day for people like me..."	
		C	"...risk is the part of the coin, first is addressed by experience and second with intuition...it is a good question."	
		D	"Risk makes you a little more vigilant to certain things, let's say your mind is a little more alert. I always take a calculated risk"	
		E	"Risk is an important factor to be considered..."	
		F	"Risk is an event that could possibly come true and have a negative impact on your business"	
			A	"If you stay only in domestic market, you die of hunger"

Aggregate dimensions	Sub-processes	Representative data (Thought units)		
		Manager	Experiential	Rational
	Perceived features of the environment, FSA, etc.	B	"I travel a lot and I always meet people who end up my contacts and future clients, I am very open, and it helps me a lot, but it is always an adventure with a lot of uncertainty..."	
		C	"Internet market is too aggressive it is too fast."	
		D	"I always had that idea of the global market, but it was more taken opportunity than a clear strategy to internationalize..."	
		E	"Companies are not understanding the necessity that they have to digitalize to survive"	
		F	"Look at this small market of 2 million users, it's quite market..."	
		Time perception	A	I knew all from the beginning, so it was a very fast process. We started exporting in the same year.
	B		Evaluation last for days and the whole process not more than that because the decision is already inside me.	
	C		Right now, we have a good position at the market, so I made the decision to take charge. Without thinking, I have the product done and now we are going to do a project to put it on sale.	
	D		Sometimes internationalization decision-making process lasted one month, two or more...	
	E		Until the internationalization idea matures the whole process can sometimes take a year, year and a bit more	
	F		Because the market is quiet and it's not that fast growing so anytime there is a big gap or someone produces demand for their purpose it's a good point to just jump there.	

All the companies in sample operate in high-velocity industries. Companies A, B, C and F followed an accelerated internationalization pattern featured with an initial focus on the international market (i.e. Born Global to International New Venture approaches), companies D and E followed a slower and gradual internationalization approach with an initial focus on the domestic market (i.e. Uppsala model pattern). Based on their initial objective of internationalization I identified a diversity of patterns. Yet the unifying factor for born global-BG's and INV's managers is the overall experiential cognitive reasoning predominance in their process of decision-making. For these managers, the initial perception of environmental stimuli and the creation of options occur with high influence of experiential reasoning, leading toward a rapid and fast screening phase. By the intervention of experiential reasoning, they just create one option, which is then evaluated. This means a kind of biased decision since they try to justify their choice with hindsight.

For example, the managerial cognitive reasoning led Company B to start internationalization only a few months after inception. The decision to internationalize was guided by emotions and only one option was taken into consideration, without detailed evaluation:

“[Perception, Experiential] I just felt like I should go to live in Thailand: there is a lot of demand and not a lot of supply. [Options phase, Experiential reasoning] Since I already had the company I went to live in Thailand, I did not consider options other than Thailand. [Evaluation, Experiential] It was not anything planned, it was not a planned goal, it was an adventure, [Evaluation, Experiential and Rational] since the overall evaluation lasted for days. [Final choice, Experiential and Rational] The decision is already inside me, I don't have to analyse it for a long period of time.”

In the case of the Manager C, the company needed 2 years to start internationalization since the inception, due to administrative issues with online retailing in the Spanish domestic market when the company was born in 2001. In these two cases, the perception of the manager and the process of selecting the option was very straightforward (both scored higher experiential reasoning on STSS scale).

Furthermore, for instance, managers of companies' D and E reasoned internationalization pattern with rationality and followed a more analytical approach during the process of decision-making all the way to a final satisficing choice. Managers of gradually internationalized companies said that the final decision appeared in their

mind after a certain time of reflection and evaluation. This matches the outcome of rational reasoning since their firms followed a gradual approach to the international market by first exploiting the domestic market and avoiding addressing simultaneously the liabilities of newness and of foreignness/outsiderness. The influence of rational reasoning and the outcome in terms of a slow process of decision-making fits with the Uppsala model guided by managerial previous experience in the industry and the need of availability of enough information as to decrease the level of uncertainty up to an acceptable threshold. In line with this, interviewee E said:

“[Perception, Experiential] I am a perfect person to foresee big things in the future, and I have this because of my experience. I already knew that there was a gap in a potentially very interesting market. [Options, Experiential and Rational] Small companies have the same need as big ones, but we don't have economic capacity, therefore I decided to attract and work well with multinationals in the domestic market that can help me enter international markets [Evaluation, Rational] a careful evaluation of the information is something I always do after the instinct is provoked, little by little I support the idea by data, data and more data. This sometimes can take a year or a bit more. [Final choice, Experiential and Rational] The final choice I made was a candidate company that was able to offer us services and it was only 120 kilometers away from our headquarters.”

5.2.2. MANAGERIAL COGNITIVE REASONING BIASES

A potential bias accompanied with experiential reasoning as presented earlier in Table 23 is the lack of consideration of a wide spectrum of options. These managers tend to consider only those that arise immediately and unconsciously based on the expertise in the industry:

“I knew how to market my product and where. I choose XYZ platform to promote my products since I knew that the main customers in this industry are from the United States. My process was straightforward. I went to the market I want since I knew the mode to launch my product and what the foreign market should be. I didn't take into consideration any other mode of entry. I knew the domestic and foreign market.” – Manager A

“I didn’t take into consideration other modes or partners abroad. I knew that there was demand for the products I can provide, and I knew that I could offer competitive prices for the global market since the beginning” – Manager C

Continuation of decision-making process leads toward the evaluation phase, in which managers were more influenced by the rational than by the experiential reasoning. Managers did evaluate firm-specific advantages, environmental features, and competition. However, we observed that experiential managers were very (over)confident in their initial generation of a limited number of options, which allowed them to feel satisfied with the evaluation phase even with the limited information available.

“In the company I work for, I already knew retailers, the domestic market, and the target foreign market. Having available data from my company logically gave me a clear idea that I had to go directly to the U.S. market” - Manager A.

On the contrary, we found the biggest difference in the evaluation phase when comparing the latter with the rational managers, who explained that further exploration and information availability is the key factor while making the decision, coupled with their perception of risk and uncertainty. This explains the fact that, since inception, Company D spent 5 years and Company E spent 16 years serving only the domestic market and exploiting resources domestically available. Manager E described that sometimes, to evaluate and implement the initial idea it takes him up to one year. This means that analytic managers tend to distrust of outcomes from experiential reasoning, which lead them to devote extra time to consider all the potential implications, a kind of “analysis paralysis” bias.

“For example, I observe facts and I have as much information as my competitors have. Then I start thinking whether this is possible, and that is not. I already have a huge experience in the industry, so I can process this information quick although I must consider all the implications. This leads me to further evaluation of all issues that I am not fully comfortable with or that I accepted with some precaution” – Manager E.

5.2.3. LEARNING FEEDBACK LOOP

In the sample, interviewees addressed the impact of learning and previous experience as a focal part of their internationalization decision-making processes. Since all the managers had experience in the industry before starting their own SV's, they addressed the upcoming internationalization decision-making in accordance with the learned and acknowledged behavior in the industry. This enabled them to perform well since the first entry and, in the case of accelerated internationalization patterns, to avoid liabilities of outsidership and of newness. Manager A knew that: "In my industry, if I remain in the domestic market I could not survive. This is an international industry and you have to compete globally if you want to survive". Similarly, manager C thought, "We want to be present and sell our products to all countries because it makes no sense to remain as purely domestic since the begging".

Managers from SV's following accelerated internationalization patterns gave similar importance to learning and feedback in accordance with their experiential reasoning. Manager A, B, C and F learned from their previous experience but were not always willing to follow the guidelines of the normative decision-making process. In fact, they seemed to learn by trial and error. In case of manager C, *"I am doing it the other way around, I first look for an initial solution [approach to predefined foreign market], then I start marketing and selling my product there, and then as problems arise I do an additional evaluation and try to solve the problems as they arise. My philosophy is to check the information in front of me and, because I know the market and I reflect on what happens, then the ideas come. I later re-evaluate the initial idea with more data"*. This means that their strong reliance on their experiential cognitive system changed the logic of the staging process of decision-making, so the evaluation phase comes after they implemented the initial choice, which is an immediate response of experiential cognition.

The Manager F mentioned that, after they went to the international market and despite the firm performed well, they realized that *"We needed to modify our portfolio to serve that international market better"*. This means that learning and feedback from environment play a crucial role in subsequent internationalization decisions and experiential reasoning is crucial for quick responses when learning while doing. This is even more relevant if the venture chose an accelerated pattern of internationalization since any mistake may put the firm at a stake.

However, cognitive reasoning biases may lead managers to underestimate or overlook signals uprising from the international market, which leads us to the following section of internationalization decision-making stressors.

5.2.4. STRESSORS OF INTERNATIONALIZATION DECISION-MAKING

Fourth, SV's had to be operating in a high-velocity industry since this environment is featured as risky, uncertain and with pressure to make decisions and implement them quickly.

Heterogeneous behavior among managers may point out the existence of a stressor arisen from an exacerbated cognitive predominance. The different perception of environmental stimuli plays a significant role in defining the internationalization pattern chosen. It affects important factors in internationalization decision-making such as uncertainty awareness and risk perception in relation to the perceived features of the competitive and host-market environment as well as the issue of organizational timing.

Managers with a predominant experiential reasoning, in general, disregarded uncertainty, very often they anticipated risk as acceptable although the normative reasoning in these circumstances is classified as extremely risky. As Manager F said: *"Risk is an event that could possibly come true and have a negative impact on your business"* and Manager B noted that although they share the opinion about the importance of risk *"[...] taking risks is part of the day to day for people like me [...]"*.

The acknowledgment of stressors for rational predominant managers had a different impact on their decision-making process. They tend to spend more time thinking about uncertainty and trying to translate it into risk, which can be estimated and lowered to the subjectively acceptable threshold, i.e. managers who are cognitively analytic cannot make quick decisions under uncertainty conditions. In such cases, they need further time to compute and analyse the level of risk and may reject the option if the threshold is too high for them. The manager D noted: *"Risk makes you a little more vigilant to certain things, let's say your mind is a little more alert. I always take a calculated risk."*

To timely react to opportunities arisen from markets, managers deploy different cognitive strategies to deal with time according to their use of cognitive reasoning. In the case of the managers A, B, C and F, the decision-making process itself is quicker, which makes them accept the higher level of risk and disregard the uncertainty issues. In that line, experiential managers tended to accelerate the internationalization decision-making process in order to be able to react to market opportunities. Manager F explained that *“Because the market is quiet and it's not fast growing, anytime there is a big gap or someone produces demand for their product it's a good point to just jump there”*. Meanwhile, managers inclined to perceive stressors through the rational reasoning had different time pressure which caused them to spend more time estimating potential implications (risks). In words of manager D, *“Sometimes internationalization decision-making process lasts one month, two or more...”* and manager E *“Until the internationalization idea matures, the entire process can sometimes take a year and a bit more”*. This feeling leads to these managers to adopt a more gradual approach to internationalization since it seems less risky for them.

5.3. OVERALL HYPOTHESES ACCEPTED/REJECTED

An important issue is an extent to which cognitive systems affect the IDMP framework. Results suggest that System-X exerts more influence than System-C on internationalization intentions, although some of the antecedents of intentions included in the TPB mediate this impact. Furthermore, cognitive reasoning impacted the IDMP framework through each stage.

It is evident that cognitive reasoning influences the antecedents of internationalization intentions with different intensities and signs (see table 24). System-C has a positive impact on PSN but negative on PBC, while there is no evidence to support its effect on ATB. Conversely, System-X exerts a positive impact on ATB, PSN, and PBC. The intuitive cognition of the potential benefits of starting a business internationally leads to a more positive attitude to IEI, thus hypothesis H1a is accepted. However, System-C does not seem to have an influence on ATB within the sample. It entails that the analytic reasoning appears not to play a role among university students that are to become international entrepreneurs regarding their attitudinal predisposition to IEI. In addition, the indirect effect of System-C on ATB through PSN is significant, but the overall total effect is not significant, therefore, H1b is rejected.

Table 25: Overall hypotheses accepted/rejected

Hypotheses accepted (A) /rejected (R)	
H1a: the higher the reliance on System-X, the more favourable attitude to start an international venture	A
H1b: the higher the reliance on System-C, the lesser favourable attitude to start an international venture	R
H2a: the higher the reliance on System-X, the more positive perception of social norms to starting an international venture	A
H2b: the higher the reliance on System-C, the more negative perception of social norms to starting an international venture	R
H3a: the higher the reliance on System-X, the more positive perception of behavioral control to starting an international venture	A
H3b: the higher the reliance on System-C, the more negative perception of behavioral control to starting an international venture	A
H4a: System-X has no direct effect on the intentions to start an international venture	A
H4b: System-C has no direct effect on the intentions to start an international venture	A
H5a: a predominance of one system over the other will display a higher intention to start an international venture	R
H5b: a balance between both systems will display a higher intention the intentions to start an international venture	R
H6a: System-X will accelerate internationalization decision- making process.	A
H6b: System-C will slow down internationalization decision-making process	A

Obtained results do lend support to H2a on the impact of cognitive system X on PSN. We acknowledge that both Systems are playing a significant role in PSN, perhaps, the lesser importance of the System-X on PSN (H2a) may be due to the size of the sample and the lack of perceived social support within the sample environment to international entrepreneurship. However, System-C has a significant positive effect on PSN, which is counterintuitive to the predicted sign (H2b). Accordingly, it seems that the valuation of social referents is a reflective, conscious reasoning process with a supplement to less reflexive, unconscious and emotional one. In fact, the average level of PSN is the highest of the three antecedents although it is proximate to the neutral point on average (mean 4.26).

Thus, it implies that cold analysis is responsible for assessing referents in contexts where the level of support from family, friends, society, and university is medium but to

establish IEI hot analysis is in charge to certain level. This is, somehow, paradoxical since closer referents are embedded in emotional relationships –an issue that deserves further investigation in future research on entrepreneurial cognition–. A potential explanation is that in low to medium supportive settings (as it is the case of the research), individuals use System-C reasoning more than System-X judgment. In the absence of clear referents, there is a need for the intervention of analytic cognitive resources.

The most interesting result is the potential trade-off between both cognitive systems regarding the PBC. While the intuitive, unconscious cognition increases the PBC, the analytic one decreases it in, virtually, the same intensity. All these effects are consistent with the illusion of control pointed by Simon et al. (2000): a kind of overconfidence impelled by the quick, emotional response balanced with the intervention of System-C lowering the latter bias. Entrepreneurs were found to exhibit more overconfidence and greater reliance on the heuristic than the general population of managers do (Busenitz and Barney, 1997). Heuristics stems from System-X. Accordingly, System-X can be responsible for this type of biased cognition (overconfidence, resistance to change, reliance on feelings) regarding starting a new venture among the individuals who are less prepared to initiate an international venture due to their still lack of experience in venturing and international context. We should consider that System-X is particularly useful in high validity environments –a feature that the international arena does not meet for these future international entrepreneurs–. However, the same context (starting a business in the international market) can be very valid for a different set of individuals: those who have enough international expertise. They hold increased capabilities to recognize the environmental clues about business opportunities. This finding is also consistent with Kickul et al. (2009), who found that intuitive university students were more confident in opportunity recognition. Observed results lend full support to hypotheses H3a and H3b: the impact of System-X on PBC is positive while System-C has a negative effect.

Results show that ATB and PBC mediate between both systems and IEI, while PSN indirectly through ATB and PBC does between both systems and IEI. This mediation lends support to hypotheses H4a and H4b: both cognitive systems influence the antecedents but not the intentionality directly.

In fact, the total effect of System-X on IEI is 0.34, while System-C is non-significant. This suggests that all the university students surveyed share a certain level of analytical cognition, which is indeed the usual content of business management courses. The educational system and university programs tend to teach analytical tools, while it is very

difficult to include intuition training in entrepreneurship education. Yet, results show that both cognitive systems play a determinant role as antecedents of ATB, PSN, and PBC within the framework of the theory of planned behavior, since individuals use both cognitive systems to make decisions (Kahneman, 2003) and both systems are relevant in entrepreneurial cognition (Castellano et al., 2014).

According to observed findings in study 2 managers with a predominance of experiential cognitive reasoning guides SV's to accelerated internationalization patterns while managers with predominant rational reasoning guided SVs' to more gradual internationalization patter. Observed findings support the H6a and H6b.

CHAPTER 6: DISCUSSION OF THE RESULTS

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	<ul style="list-style-type: none">6.1 Implications for theory<ul style="list-style-type: none">6.1.1 Implications of study 1: Psychological enhancement of intentional models of international entrepreneurship6.1.2 Implications of study 2: Cognitive reasoning effects on internationalization decision making6.1.3 Overall theoretical implications6.2 Practical implications of overall research findings
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CHAPTER 6. DISCUSSION OF THE RESULTS

The results of performed studies are discussed with acknowledged human bias of the decision-maker categorization of as predominantly experiential or rational. This approach is pursued in order to persuade the benefits of each cognitive system. Furthermore, the only way to provide counterintuitive conclusion is by observing anomalies such as Oviatt and McDougall (1994), among others, did. Therefore, with respect to human conditions of simplification and categorization as well the basic mechanism that is the predominant manner of learning we identified reasons for anomalies by which we can explain why they happen and how we can pursue or oblivate path of anomalies when speaking about heterogeneous internationalization patterns. As Reuber et al. (2017) in *Journal of International Business* Editorial noticed scholars tend to put firms, decision-makers, managers in categories; they are not inherently located there. With this in mind, we point out that an implication for managers dealing with cross-border activities is the observation of an anomaly that serves to expand existing frameworks and theories, in order to supplement the theory of international entrepreneurship and internationalization.

6.1. IMPLICATIONS FOR THEORY

This study has investigated the impact of the two cognitive systems on individuals' international entrepreneurial intentions and internationalization decision making process among a Spanish sample. For the Study 1, we have used the Ajzen's (1991) Theory of Planned Behavior and have supplemented it with the inclusion of cognitive System-X and System-C as precursors of the widely investigated antecedents of entrepreneurial intentions (ATB, PSN, PBC). Observed results showed that both cognitive systems are internationalization pattern drivers. Therefore, cognitive systems play a role in explaining the heterogeneous internationalization pattern pursued by SVs. Additionally, findings provide the explanation for the lack of intentionality to go international short after inception among young potential entrepreneurs. This may partly explain why new ventures decide massively to first exploit the domestic market and, after that, consider entering the international market. For the second study, we have explored how the managerial inborn structure; previous experience and the perception of the environmental validity affect the internationalization process. We used the grounding theory approach to investigate the influence of cognitive precursors on decision-making process since internationalization decision-making process parallels the psychological underpinning. Adopting this approach enabled me to investigate the overall acceleration of decision-

making process which impacts the internationalization process acceleration and potentially survival of SVs.

6.1.1. IMPLICATIONS OF STUDY 1: PSYCHOLOGICAL ENHANCEMENT OF INTENTIONAL MODELS OF INTERNATIONAL ENTREPRENEURSHIP

The performed study views the role of cognitive systems as an antecedent of international entrepreneurship intentions. Understanding the role of cognition in international entrepreneurship intentions elevate theoretical findings to new research avenues in which scholars can investigate the heterogeneous behavior of future entrepreneurs coming from low and moderate supportive environments. A counterintuitive finding is the existence of intentionality within an environment with low to moderate perceived social support. This intentionality is built from future entrepreneurs cognitive reasoning predominance to reflect and/or follow their gut-feelings relative to their perceived behavioral control, the perceived social norms and the attitude toward the behavior. The inclusion of individual cognition enhances the explanatory power of intentionality models.

In the case when individuals rely heavily on System-X then they will tend to hold a higher international entrepreneurial intention. This outcome is caused by the higher perception of behavioral control, which is a kind of over-optimistic prediction of their capacity to maintain the behavior through the entire internationalization process. On the other hand, the System-C leads to a decreased internationality because further justification and evidence are required by the “paralysis by analysis” feature. This cognitive bias causes a delay in starting the international ventures under the influence of perceived social norms. Demonstrated results also entail a major finding for theory: the estimation of the effect size is very similar for both cognitive systems, although inverse in sign. This means that individuals with a predominance of one system over the other will tend to be biased in their entrepreneurial decisions. If the unbalance comes from a significantly higher reliance on System-X than on System-C, then the potential entrepreneur will tend to be overoptimistic in his/her predictions, a bias that should be corrected or, at least, considered for the sake of the new venture’s survival. Conversely, if System-C reliance is higher than System-X, then the potential entrepreneur will be paralyzed by the need for further analysis, which may result in missing business opportunities. In both cases, the potential cognitive biases steaming from cognitive predominance should be considered when developing internationalization plan.

This finding opens a new horizon for further inclusion of cognition in international entrepreneurship and international business research. Although the investigation of the firm's heterogeneous behavior has always attracted the attention of scholars, it is important to understand how individual cognition can perform differently within the same environment. The inclusion of both cognitive systems into cognitive reasoning adds more information than the mere categorization of individuals on unique cognitive systems. Additionally, it seems that a certain use of both cognitive systems is an adaptive mechanism that individuals have acquired during their life. In the case of international business, it seems that intuitive reasoning can only be used if paired with international experience; otherwise, one cannot trust the overoptimistic results emanating from reasoning. Yet this also helps explain why some new ventures may skip the domestic market and internationalize shortly after inception: it is likely that the entrepreneurs holding (international) experience in the industry will enjoy a higher level of experiential learning stemming from a well-trained System-X during IDMP.

6.1.2. IMPLICATIONS OF STUDY 2: COGNITIVE REASONING EFFECTS ON INTERNATIONALIZATION DECISION MAKING

The internationalization decision-making process is complex and comprehends plenty of uncertainties and risks. Entrepreneurs are frequently labelled as risk-takers, as they tend to simplify complexity and lower uncertainty to his/her own acceptable level. The mechanism explaining heterogenous final internationalization choices in SV's internationalization is situated on the (mis)fit between the perception of environmental validity (comparison of domestic and host market) and how the entrepreneur-managers cognitive systems govern the subsequent process of immediate, unconscious responses followed by deliberation and analysis. To become sure that the decision made fulfills the SV's and environmental requirements, the manager-entrepreneur checks the results of both cognitive systems X and C (the outcomes of inner feelings and calculated estimations of future states).

As explained from the neuropsychological point of view, System-X provides the first impression when making decisions, which allows them to initially reduce complexity and uncertainty by narrowing the number of available options. System-C is responsible for the later evaluation by analytically scrutinizing options, although System-X intervenes in weighing the critical variables. Correspondingly, the final decision has to meet the requirements of both. Stressors to make decisions -limited time and bounded knowledge

- call for scholars to rethink and supplement the SV's internationalization with the decision-making process. The Dual-Process theory has shown to be a fruitful approach since both cognitive systems intervene in the IDMP. The interaction between the entrepreneur's level of reliance on each system, and the environmental validity guides process until the final internationalization choice is reached.

The performed study provides compelling evidence and contributes to the literature on internationalization by incorporating an individual-level approach to internationalization theory. Adopting the Dual-Process theory enhances the understanding of how decisions are made in SVs. The theoretical argument is that, in creating options, cognitive reasoning yields an immediate response that "experiential" managers tend to accept, while "rational" ones go ahead to reflect on it and to generate more options to evaluate. This is owed to the influences that differences in cognitive reasoning have on task-specific judgments, such as the perceived features of the environment surrounding the firm's internationalization process. Stressors such as industry velocity, time to reach a decision, or even pressure for results seem to have a role to explain the adoption of a certain cognitive reasoning combination that, in the end, explains the choice of a certain pattern of internationalization. These individual differences elucidate the observed heterogeneity in internationalization patterns of firms under similar contexts. A load of each cognitive influence is task- and context-dependent. Therefore, the perception of managers and their specific use of certain levels of experiential and rational reasoning will yield different choices. It can be argued that a certain combination of each cognitive reason is an adaptive mechanism the SV's finally adopts depending upon the external stressors. Hence, in making internationalization theoretical models more accurate, scholars should include cognitive reasoning at least as control variables that will capture heterogeneous behavior. Its inclusion may also help explain why some firms do not advance to more committed modes of internationalization or why some others choose to go international under highly committed modes.

6.1.3. OVERALL THEORETICAL IMPLICATIONS

The vast majority of research regarding the internationalization of the SV's take as the objective of the research the features of the process as an explanatory variable, from path-dependency and learning based aspect while merely acknowledging the micro level (i.e. the importance of decision-makers). Since Johanson and Valhne fundamental work (1977), the experiential learning and managerial perception of differences among domestic

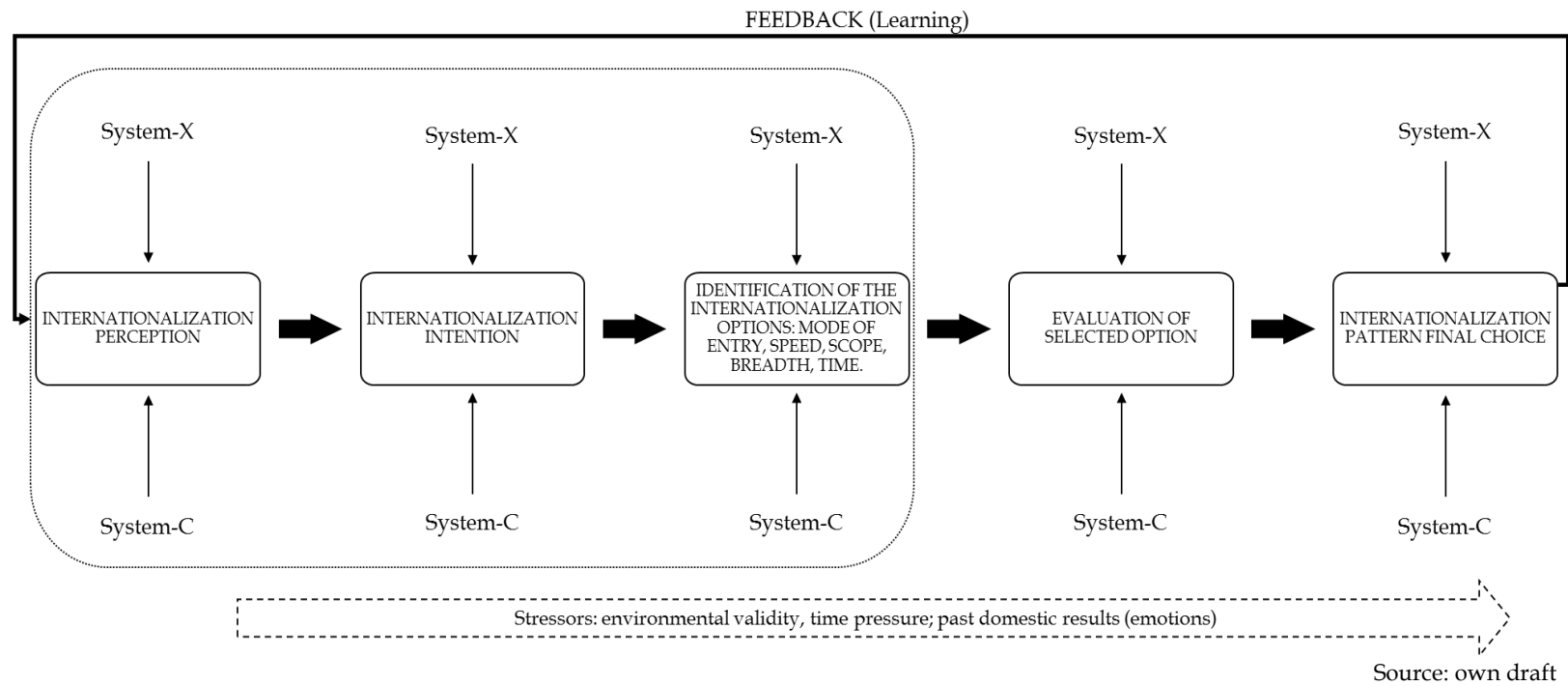
and host markets with respect to perceived risk and uncertainty have been positioned among principal factors in explaining the internationalization process research. However, up to date performed studies demonstrated that experience is multifaceted, underpinned by distinct learning outcomes that are causing heterogeneity of internationalization patterns choices (Putzhammer et al., 2018). In that line, this dissertation adopted the notion that internationalization experience is context, task-dependent and is based on cognitive capabilities of decision-makers to acquire the salient internationalization experience. While departing from the notion of rational economic decision-maker and adopting the possibility of a manager making precipitate internationalization decisions (Buckley, 2016), we are able to provide potential explanations for the heterogeneous international behavior of SV's (Hutzschenreuter et al., 2007).

The managers' cognition, particularly in SV's, operating under terms of increased uncertainty, play a role in quickly recognizing and responding to environmental changes. Although observed cases yielded different paths of internationalization from gradual to accelerated, the unifying factor was the development of subjective representations of the environment which in turn, drive the managerial strategic decisions and subsequent firm's behavior. In other words, subjective representations that top managers develop about their environments help define the firm's strategic agenda (Dutton and Jackson, 1987). The main difference in the managers' environment is the managers' interactions within foreign business relationships, such as relationships with certain foreign customers, suppliers, and competitors, which is in line with Blomstermo et al. (2004) and Kickul et al. (2009). In fact, following one of the Uppsala model's tenets, firms going international gradually need to overcome the liabilities of outsidership. Firm E did it by using multinationals operating in the domestic market as a springboard to new foreign markets. On the other hand, companies A, B, C and F, which followed an accelerated and rapid internationalization process, seemed to be less affected by that liability. Instead, the manager's experience was crucial, which is also in line with the INV theory and the entrepreneur's international orientation. This can be linked to the predominance of the experiential reasoning among cases since these entrepreneurs and managers are able to quickly devise how to seize on opportunities in the international market.

All findings considered, the process of internationalization decision-making parallels the psychological process: managers are to recognize what the strategic problem is in order to generate a battery of options and choose the one that yields higher satisfactory levels of expected results. We added the emphasis to the issue of satisfactory following the Simon's (1955) arguments of bounded rationality choice, which are suboptimal although perceived as the best solution by the decision-maker at the precise moment when the decision is

made. Internationalization decision-making needs the combination of both cognitive reasoning through the entire process (see the integrated framework in Figure 11). However, to accelerate the process, managers with a predominance of experiential reasoning increase the pace of internationalization. The internationalization acceleration is building on the managerial experienced perception which enabled the lower level of risk perceived while scanning the international environment. On the other hand, the managers with increased levels of well-trained rational reasoning needed additional assessment of the initial perception by evaluating everything even at the initial stage of the internationalization decision-making process. This has meant that the manager's cognitive reasoning has provided the normative theory, which requires further empirical evidence in the how much line of inquiry.

Figure 11: Integrated internationalization decision-making process framework



6.2. PRACTICAL IMPLICATIONS OF OVERALL RESEARCH FINDINGS

The notion of survival is among top issues that practitioners are trying to solve. According to Farinas and Huergo (2015), the young companies have suffered more than other types of firms in the recent crisis. Between 2009 and 2012, the survival rate of Spanish companies at five years of age fell by nine points (from 48.9% to 38.9%), more than in any other country. According to the results, the overall perceived social norms in Spain do not favour internationalization, which is in line with Liñán's (2008) findings. Furthermore, according to Puig et al. (2014), a vast majority of new ventures remained purely domestic for years which caused their survival. Puig et al. (2014) found that Spanish textile ventures which had gone international had a higher chance of survival than purely domestic new ventures. Therefore, there is a need for further fostering the SV's decision-maker's intentions toward the internationalization.

Overall investigation results point out that the lack of internationalization intentionality is anchored in the predominant use of analytical skills and the lack of perceived social norms. However, if the decision-maker is capable of learning and adopting expertise during the process than the decision to go international through the trial and error approach would seem like reasonable behavior. The potential issues arise when taking into consideration cognitive biases such as overconfidence and higher perceived validity which in the long term diminish the necessity for additional analysis.

It is still unclear the type of interventions that are required for a cognitive shift from an analytic toward a more intuitive judgment and vice versa in the internationalization context. When making decisions that entail extremely uncertain results. The analytic tools we teach to future managers in faculties may partially explain the lack of international intentionality. Yet we should understand that intuition can be trained in certain environments. As Kahneman (2003) noted, individuals should have adequate opportunity to learn and be in a valid environment in order to develop intuitive cognitive reasoning. This could be trained in secure environments in business management universities, where we could develop valid environments for training international intuition. Therefore, in order to build upon the managerial cognitive reasoning rather than simply implementing the anchored normative strategies of remaining purely domestic from the inception, entrepreneurs should primary learn to rely on their achieved experience and to enhance their learning capabilities along the internationalization process.

To increase the potential survival rate, firms struggling for internationalization should develop training for managers responsible of this process, which are supposed to include specific contents on how to identify clues that may lead to business opportunities abroad (System-X). This may help accelerate the process of internationalization for new ventures competing in global industries (e.g. high-tech manufactures and knowledge-intensive services) and potentially increase their survival chances.

Internationalization decision-makers are constantly under circumstances of extreme uncertainty. This environment leads them toward the decisions that do not have a right answer, nor could be solved by rational analysis alone. A combination of analysis with intuition is required in order to come up with the satisficing final decision. Managers are subjected to a myriad of cognitive biases through the decision-making process. Identifying the potential biases in advance will be beneficial for more accurate business predictions. Since internationalization decision-making process parallels the psychological underpinning the ability of decision-maker to perceive and identify, evaluate the internationalization opportunity increase the SV's survival rate. Therefore, the managerial cognitive reasoning should be treated as a currency and a competitive advantage.

A critical issue is whether the manager's cognitive systems may have disregarded some options because of his/her cognitive biases stemming from previous experience: System-X based managers will tend to apply in foreign markets the same mental structure as used in the domestic market, so it may be biased by their overconfidence, although the environmental validity be different. Conversely, managers with a strong reliance on System-C may be paralyzed by their need for information at every step, which delays decisions even when environmental stressors call for an immediate internationalization. Therefore, a recognition of cognitive influence and a balanced use of both cognitive systems should help overcome the potential perils of any cognitive predominance in every stage of the process of decision-making (perception, options, evaluation, and choice).

CHAPTER 7: CONCLUSION

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CHAPTER 7.	CONCLUSION <ul style="list-style-type: none">7.1 Research conclusion<ul style="list-style-type: none">7.1.1 Conclusions regarding the theory of internationalization7.1.2 Research conclusions on the scale for measuring cognitive reasoning applied to international business7.2 Research limitations7.3 Future research avenues

CHAPTER 7. CONCLUSION

7.1. RESEARCH CONCLUSION

This doctoral dissertation has tried to dig deeper into the behavioral micro-foundations of the process of decision-making in international strategy, seeking to better understand the mental processes of internationalization decision-makers. We have provided arguments of how the individual's cognitive reasoning and the environmental validity perception interact while making internationalization decisions. Furthermore, we alerted to certain issues arising from selecting decision-makers in particular cognitive reasoning groups.

7.1.1. CONCLUSIONS REGARDING THE THEORY OF INTERNATIONALIZATION

When the perception of markets validity is different between the host and domestic markets, then the idiosyncratic decision-maker's cognitive systems will intervene. It is the individual's interpretation of environmental differences in terms of ability to maintain the international behavior chosen under control based on the knowledge available *ex-ante*. Experiential decision-makers may accept big differences and will perceive them as not so relevant. Moreover, rational prone decision makers are more inclined to perceive the differences as unacceptable. This difference in perception is dependent upon the predominance of one cognitive system over the other. If the internationalization decision-maker perceives a host-environment as highly valid, then s/he will tend to replicate the business model already applied in the domestic market. As far as this perception remains from market to market, then the internationalization decision-maker will apply this analogy and no change in strategy is warranted. This helps explain why accelerated or early patterns of internationalization are more likely to happen in global industries: the average manager will tend to think that there are no substantial differences between markets. However, if an entrepreneur with an exacerbated System-C is such context, then the result of his/her cognitive reasoning will yield a different prediction and will seek a process, characterized by gradualism and stages since s/he will hold a higher intolerance to ambiguity. Likewise, in the case of low validity environments, gradual processes of internationalization are warranted since the entrepreneur will perceive the host environments as unpredictable. Under these conditions, decision-maker has no means to gain knowledge from inexistent environmental cues. Or at least, his/her cultural schemata

will be unable to interpret such environmental stimuli. Under these circumstances, an exacerbated System-X may bias the internationalization decision-maker's judgement and reach to the conclusion that the perils are acceptable since s/he thinks his/her intuitive expertise has already been in a similar situation. This kind of overconfidence introduces a departure from the gradual theory.

Overall this dissertation contributes to the internationalization and international entrepreneurship literature by incorporating the managerial cognitive reasoning role as a potential explanation for the observed heterogeneous internationalization patterns of small ventures. We have sought to investigate how and to what extent does the managerial cognitive reasoning affects and guide the process of internationalization decision-making in the case of SVs. This study has shown that an individual's cognitive reasoning has an influence on the choices of internationalization and that additionally can lead SV's managers to direct their attention to specific parts of the decision-making process. This dissertation furthermore alerts to potential cognitive biases in each stage of the internationalization decision-making process, so that managers can adapt the internationalization pace to the firm's and manager's characteristics.

7.1.2. RESEARCH CONCLUSIONS ON THE SCALE FOR MEASURING COGNITIVE REASONING APPLIED TO INTERNATIONAL BUSINESS

For the cognitive reasoning metric, in the first study, we used the CSI-index created by Allinson and Hayes (1993). Reasons for choosing it is based in properties of the CSI: (a) a distribution of scores closely approximating theoretical expectations, (b) excellent reliability in terms of internal consistency and temporal stability, and (c) good initial evidence of construct and concurrent validity. In addition, the CSI has proved easy to apply in survey research. In order to attribute different point of view, certain modification needed to be obtained CSI scale by shifting scale from the 2-way dimension in order to fully represent the possibility of a managerial way of thinking. The original CSI excludes cognitive complexity since movement in either direction along the intuition-analysis dimension of cognitive style inflicts reduction at the other end of the continuum.

In light of the critiques of Hodgkinson and Sadler-Smith (2003), the main problem is that the original operationalization of the scale was designed to obtain a single number that rated the individual's cognitive style into two opposed extremes, namely intuitive and

analytic styles. Implicitly, this means a unitary view of the cognitive reasoning, which previous research has shown to be ineffective (see Evans & Stanovich, 2013). Dual Process Theory states that individuals process information using the two cognitive systems. Yet the scale has proved to be useful in several investigations in terms of content. Thus, we decided for the 7-point Likert scale. This operationalization allows individuals to declare s/he uses none, one or both cognitive systems. The original scale included 22 items for measuring the analytic style and 16 for intuitive. The original scale attributed a 3 if the respondent feels the analytic sentence met his/her cognitive approach, a 2 if unsure, and 0 otherwise. Yet the positive or negative wording strongly influences individuals' perception, as Kahneman and Tversky (1984) showed in the Asian disease game. In a sample of future internationalization decision-makers (study 1), we have found that System-X exerts a positive total effect on internationalization intentions, while the total effect of System-C is not significant. Nevertheless, both cognitive systems are relevant to explain the antecedents. System-C and System-X have a positive impact on increased levels of attitudes toward IEI. Therefore, the attitudinal aspect is shaped by the positive intervention of both cognitive systems.

Furthermore, in study 2, we used the Situation Specific Thinking Style Scale (STSS) which represents the situation-specific thinking style or need for cognition with a previously validated questionnaire created by Novak and Hoffman (2009). The scale provides ten assessments to assess the use of the experiential cognitive reasoning and another ten for analytical cognitive reasoning. Among the variety of scales reported in the meta-analysis of Phillips et al. (2016), the STSS is task-specific so we could control that the interviewee replied to the scale specifically for the task of making internationalization decisions. Therefore, individuals can change the weight of each cognitive system depending upon the decision to be made. Finally, since internationalization is task-specific decision-making process the use of STSS scale provided profound observation and therefore future cognitive reasoning research should adopt STSS scale.

7.2. RESEARCH LIMITATIONS

As limitations, we acknowledge that this study has only investigated the Spanish context. Moreover, observed results regarding the internationalization intentions should be interpreted at the stage of opportunity recognition. We acknowledge that future entrepreneurs, study 1, are still studying and, a vast majority of them has not reflected on

the possibility to start an international venture yet. Also, we acknowledge the existence of further limitations that make findings only valid in similar contexts.

Following the prospect theory of Kahneman and Tversky (1979), individuals tend to take increased risks when trying to avoid uncertain losses than to seize on uncertain gains. Spain is still starting to recover from the recent global crises, which may have caused that individuals take additional risks to avoid failure of firms. This would be represented by non-normative choices of interviewed managers in Study 2. Hard as we tried, we could not find additional cases of increased levels of analytical and gradual internationalization in high-velocity industries. On the other hand, we found additional cases of increased levels of experiential reasoning coupled with internationalization following an INV and BG process. However, following ground theory approach no new topics arose from those additional cases thus for the sake of simplicity and wordiness, we decided to exclude them from the analysis.

For the purpose of the dissertation research aim, we studied firms that entered foreign markets only through the exporting mode, which means that we were not able to ascertain how does cognitive reasoning plays a role in the more committed mode of entries. However, it should be mentioned that it is quite difficult to find increased committed foreign direct investments among SVs due to their constrained size. Yet these limitations should make us reflect on the possibility that a certain type of fit between cognitive reasoning and the pattern of internationalization may exist.

7.3. FUTURE RESEARCH AVENUES

The IDMP framework provides testable propositions for future research. Therefore, future research should investigate whether the predominance of any cognitive system is more suitable for certain type of firms, industries, and environments and whether there is a linkage between that and post-internationalization performance. In addition, research avenues towards the promising land of applied social cognition should be opened, i.e. how we can investigate further the issues around perception and decision-making in internationalization process from the individual unit of analysis to the socio-technic context of the firm and larger organizations such as multinationals. Future developments should investigate how we can train decision-makers to shift from one

cognitive system to the other in their decision-making processes, depending upon contextual factors around the decision.

In light of the findings, further research should test whether the analytic mode of processing information is pervasive in individuals other than decision-makers who are responsible for future internationalization or whether it is context-dependent in low supportive settings. Therefore, the necessity to identify rational reasoning in internationalization decision-makers contexts should be studied and constructed upon the performed post-internationalization results.

The qualitative study showed that some individuals seem to consider uncertainty when making international decisions while others give to this a lesser importance or even disregard it. Accordingly, uncertainty should be included in future investigations on the managerial cognition in international business. An imitative behavior may explain why some firms adopt the wait and see approach regarding the moment of internationalization. A second issues is the perception of the host-market as a valid environment to gain experiential knowledge quickly. It is plausible that managers responsible for international decisions may incorrectly assess a host-environment as valid so they will try to apply the experiential knowledge stemming from their System-X. This may yield wrong results if the manager equates host and home markets when they are not. The inclusion of the comparative perception of both markets will yield more accurate predictions in the research of managerial cognition in internationalization. A different feature of the environment is its ambiguity: whether the environment provides clear-cut signals or not regarding what could be the best decision in light of those signals (location, entry mode...).

Finally, researchers should devote efforts to include the short and long-term rewarding system and intertemporal discount in this debate. Individuals with a natural tendency to rely on System-X showed a tendency to gamble more than those with a preference for System-C did when they have to discount rewards in the short term (Frederick, 2005). If so, how does a diversity of cognitive systems in entrepreneurial team affect international venture decisions? This will help understand internationalization patterns over time (inter-temporal discount and the organizational vs. individual reward systems) to escalate this debate to group cognition in international business research. A promising research avenue that should follow the path opened by Healey et al. (2015) on shared cognition.

In summary, the results suggest that the intervention of both cognitive systems is critical to understand internationalization decision-maker's behavior. Instead of categorizing individuals into types of cognitive systems a crucial issue that scholars in international business cognition should consider is how both cognitive systems interact. The Dual Process Theory has shown that both cognitive systems intervene in decision-making (Kahneman, 2003), so it is important to study how to reach optimal decisions to start an international business by utilizing both types of cognition. Since recognition is strongly dependent on the surrounding context, so do the discovery and recognition of international business opportunities are and subsequently international performance. The open question is whether there is an optimal combination of both cognitive systems along the entrepreneurial process and the specific portion required of each to be a successful entrepreneur.

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APPENDIXES

APPENDIXES

APPENDIX 1: QUANTITATIVE STUDY-1 QUESTIONNAIRE

ID: _____ Date: _____ E-mail address: _____

Age (years):	Gender (mark with X)	Male <input type="checkbox"/>
		Female <input type="checkbox"/>

Choose the response which best defines your level of agreement with the statement. Work quickly, giving your first reaction in each case, and make sure that you respond to every statement. A set of expressions related to international entrepreneurial orientation are presented. Rate these expressions according to your degree of agreement (i.e. how well statements reflect reality)

1=totally disagree; 4=neither agree nor disagree, uncertain; 7=totally agree

COGNITIVE STYLE INDEX							
I am careful to follow rules and regulations at work.	1	2	3	4	5	6	7
I rarely make 'off the top of the head' decisions.	1	2	3	4	5	6	7
I find detailed, methodical work satisfying.	1	2	3	4	5	6	7
I would rather that my life was unpredictable than that it followed a regular pattern.	1	2	3	4	5	6	7
My 'gut feeling' is just as good a basis for decision making as careful analysis.	1	2	3	4	5	6	7
I am the kind of person who casts caution to the wind.	1	2	3	4	5	6	7
I am always prepared to take a gamble.	1	2	3	4	5	6	7

Note: due to copyright permission only, items used for final results are presented. The scale is available upon request to Emeritus Prof. Chris Allinson at cwa@lubs.leeds.ac.uk and cannot be reproduced.

PERCEIVED BEHAVIORAL CONTROL							
If I decide to start my own business with an international orientation, I would not know where to start	1	2	3	4	5	6	7
Creating my own business with an international vocation is too risky	1	2	3	4	5	6	7
I'm sure that I could keep up with the fundamental aspects of my own international business	1	2	3	4	5	6	7
If I had the opportunity and the necessary resources, I would create my own company with an international orientation	1	2	3	4	5	6	7
I am developing the necessary skills to successfully operate my own business with an international orientation	1	2	3	4	5	6	7
Creating a company with an international vocation and keeping it running would be an easy task for me	1	2	3	4	5	6	7
I'm ready to start a viable international business	1	2	3	4	5	6	7
I can control the process of creating a new international company	1	2	3	4	5	6	7
I have the necessary practical knowledge to create a company with an international vocation	1	2	3	4	5	6	7
I know how to develop an international business project	1	2	3	4	5	6	7
If I tried to start an international firm, I would have a high probability of succeeding	1	2	3	4	5	6	7
I think that I could operate successfully a small international business	1	2	3	4	5	6	7

ATTITUDE TOWARD THE BEHAVIOR							
Creating my own business with international orientation is an opportunity to achieve success	1	2	3	4	5	6	7
I like working for third parties	1	2	3	4	5	6	7
I would prefer to operate a small international business instead of being a mid-level manager in a company	1	2	3	4	5	6	7
Being an entrepreneur with an international vocation implies more advantages than disadvantages	1	2	3	4	5	6	7
A career as entrepreneur with an international vocation is attractive to me	1	2	3	4	5	6	7
Being an entrepreneur with an international vocation would entail great satisfaction for me	1	2	3	4	5	6	7

PERCEIVED SOCIAL NORMS							
Owners of small international companies can succeed in the current economic situation	1	2	3	4	5	6	7
I have great respect towards the owners of small international companies	1	2	3	4	5	6	7

With regulation and the current bureaucracy, it is difficult to manage a profitable international business	1	2	3	4	5	6	7
If I decided to create my own international company, I would receive a lot of support from my family	1	2	3	4	5	6	7
If I decided to create my own company with an international vocation, I would receive a lot of support from friends and acquaintances	1	2	3	4	5	6	7
International entrepreneurial activity contradicts with the culture of my country	1	2	3	4	5	6	7
The role of the entrepreneur with an international vocation in our economy should be more recognized	1	2	3	4	5	6	7
Many people find it hard to accept the figure of an entrepreneur with an international vocation	1	2	3	4	5	6	7
The society, in general, considers that the international entrepreneurial activity is too risky for the value that contributes	1	2	3	4	5	6	7
It is commonly believed that the international entrepreneur has advantages over other entrepreneurs	1	2	3	4	5	6	7
In our university, there is a well-functioning support infrastructure for the start-up of new international companies	1	2	3	4	5	6	7
In my university, you get to meet lots of people with good ideas to start a new international business	1	2	3	4	5	6	7

INTERNATIONAL ENTREPRENEURSHIP INTENTION							
I plan to operate my own international business immediately after I graduate	1	2	3	4	5	6	7
I plan to operate my own international business between 5 and 10 years after graduation	1	2	3	4	5	6	7
I plan to operate my own international business, but it will be when I have ten or more years of professional experience	1	2	3	4	5	6	7
I am ready to do anything to become an entrepreneur with an international vocation	1	2	3	4	5	6	7
My professional goal is to become an entrepreneur with an international vocation	1	2	3	4	5	6	7
I will make every effort to start and run my own company with an international vocation	1	2	3	4	5	6	7
I am determined to create an international company in the future	1	2	3	4	5	6	7
I have very seriously thought about creating my own international company	1	2	3	4	5	6	7
After finishing the studies, I will intend to work as an employee	1	2	3	4	5	6	7
After finishing the studies, I will intend to create my own international company	1	2	3	4	5	6	7
Among the diversity of options for my professional future, I prefer to become an entrepreneur with an international vocation	1	2	3	4	5	6	7

APPENDIX 2: QUALITATIVE STUDY-2 QUESTIONNAIRE

1. Gender:
 - Male
 - Female
2. Age?
3. The highest academic level achieved:
 - Primary school
 - High school
 - Bachelor's degree
 - Master's degree
 - Doctoral degree
 - _____
4. Years of experience in particular industry?
5. Years of experience as a manager in the industry (domestic market)?
6. Years of experience as a manager in international business activities?
7. A number of employees (full time employed)?
8. Which year was established the company?
9. Which year did you start the internationalization process (export, joint venture, subsidiary...)?
10. How long did it take (since the first idea to the final decision of mode of entry and foreign market)?
11. Did you first identify the market to which you would internationalize (for the first time) or did you decide the entry mode and then selected the market that would fit the entry mode selected?
12. Did you have any pre-defined goals when you decided to enter the first international market?
 - a. Internationalization process was motivated in order to avoid losses at the domestic market or it was seen an opportunity to grow the business?
 - b. Was it long-term or short-term goal?
13. Could you describe your decision-making process (mental) when deciding on the entry mode strategy with which to enter a new (any) foreign market?
 - a. How did you enter the first international market?

- b. What were the reasons to exclude certain entry modes and consider others in a moment of selecting alternatives?
14. What was your perception of the market at the time of entry in relation to uncertainty and risk?
- a. Do you think that uncertainty and risk are different or the same? Were they different for you in process of entry mode evaluation? Why?
 - b. Do you consider specifically uncertainty when making internationalization decision? Or you think only about the risk? Do you think that they can be separated during the evaluation phase of entry mode decision making?
15. How did you evaluate previously selected entry mode options?
- a. How did you analyse the alternative options?
 - b. Did you collect any information for each alternative?
 - c. If yes, how? If no, why?
16. What were your final decision-making criteria?
- a. How did you make the final decision?
 - b. When did you make the decision?
 - c. How long did it take to make the decision?
17. Are you satisfied with the success of your entry-mode selected?
18. Have the objectives set been subjected to any change over the first financial year?
19. What has been the dynamics of the percentage of foreign sales over total sales from inception until present?

SITUATION-SPECIFIC THINKING STYLE

When you decided the entry mode into international markets, you may have adopted different approaches to the way you finally made the decision. Below there are 20 statements designed to identify your own approach. This is not a test of your ability, and there are no right or wrong answers. Simply choose the response which best defines how you did that first decision of internationalization your own opinion. Work quickly, giving your first reaction in each case, and make sure that you respond to every statement.

1=totally disagree; 4=neither agree nor disagree, uncertain; 7=totally agree

Adapted from Novak T.P and Hoffman L.D. (2009)

I reasoned things out carefully	1	2	3	4	5	6	7
I used my gut feelings	1	2	3	4	5	6	7
I tackled this task systematically	1	2	3	4	5	6	7
I went by what felt good to me	1	2	3	4	5	6	7
I figured things out logically	1	2	3	4	5	6	7
I used free-association, where one idea leads to the next	1	2	3	4	5	6	7
I approached this task analytically	1	2	3	4	5	6	7
I relied on my sense of intuition	1	2	3	4	5	6	7
I was very focused on the steps involved in doing this task	1	2	3	4	5	6	7
I relied on my first impressions	1	2	3	4	5	6	7
I applied precise rules to deduce the answers	1	2	3	4	5	6	7
Ideas just popped into my head	1	2	3	4	5	6	7
I was very focused on what I was doing to arrive at the answers	1	2	3	4	5	6	7
I used my heart as a guide for my actions	1	2	3	4	5	6	7
I was very aware of my thinking process	1	2	3	4	5	6	7
I had flashes of insight	1	2	3	4	5	6	7
I arrived at my answers by carefully assessing the information in front of me	1	2	3	4	5	6	7
I used clear rules	1	2	3	4	5	6	7
I trusted my hunches	1	2	3	4	5	6	7
I used my instincts	1	2	3	4	5	6	7

RESUMEN

RESUMEN

CUESTIÓN DE INVESTIGACIÓN Y OBJETIVOS

Factores estresantes de los mercados como la globalización continúan acelerando la velocidad del entorno en prácticamente cualquier industria (Paul et al., 2017; Knight and Liesch, 2016), lo que provoca que los directivos de las pequeñas empresas-PE tengan que enfrentarse cada vez más a las presiones de tener que internacionalizarse al poco de fundarse si quieren que la PE sobreviva (Puig et al., 2014). En estas circunstancias, el proceso de toma de decisiones sobre internacionalización se ve afectado por una complejidad adicional, por el riesgo inherente y por la apabullante incertidumbre derivada del poco tiempo disponible para tomar dichas decisiones. Teniendo en cuenta las actuales condiciones del mercado internacional, no sorprende el hecho de que la explicación definitiva de la heterogeneidad de patrones de internacionalización observada entre PEs permanezca todavía velada. El origen de esta heterogeneidad puede estar enraizado en la aproximación conductual al razonamiento directivo (Nielsen and Nielsen, 2011). De acuerdo con la teoría normativa de internacionalización, muchas de las decisiones sobre el compromiso de recursos con mercados internacionales están influidos por los costes de transacción (Williamson, 1975)-la percepción de que hay algún riesgo de que algún agente en el mercado internacional tenga un comportamiento oportunista-, y por el aprendizaje basado en la experiencia tanto de la empresa (model Johanson and Vahlne, 1977, 2009) como del propio manager-emprendedor (Oviatt and McDougall, 1994, 1999)-la necesidad de obtener conocimiento del mercado internacional en base a la experiencia en dicho mercado. Estas decisiones se basan parcialmente en cómo el manager percibe las condiciones del mercado objetivo (internacional), conjuntamente con su percepción del posible encaje de las capacidades de la empresa en el mercado doméstico y las capacidades necesarias para competir en dicho mercado objetivo. De entre la variedad de patrones de internacionalización disponibles para las empresas, algunos directivos escogen alejarse del comportamiento que la teoría normativa predice cuando toman estas decisiones, mientras que otros no.

Los teóricos conductuales señalaron que el mismo factor estresante de un mercado puede ser percibido de manera diferente por diversos directivos (Cyert and March, 1963; Maitland and Sammartino, 2015a), lo que implica que finalmente la heterogeneidad observada de patrones internacionales puede obedecer a las diferentes características

conductuales y de percepción que los directivos pueden tener. La cuestión radica en saber si esto es así, si los aspectos cognitivos del directivo pueden ayudar a explicar dichos comportamientos. Se debe tener en cuenta que un comportamiento que se sale de lo que cabría esperar en base a la teoría podría implicar un riesgo adicional, una especie de sesgo cognitivo que impediría al directivo tomar la mejor decisión posible sobre la internacionalización. Esto es si cabe más preocupante entre las PEs, dadas sus mayores limitaciones en recursos y capacidades respecto a las empresas de mayor tamaño.

También se debe tener en cuenta que el patrón de internacionalización, una vez escogido, es muy difícil cambiarlo y muchas veces puede significar la diferencia entre la supervivencia o el cierre de la empresa (Puig et al., 2014). La escuela del proceso de internacionalización tiene a la teoría de Uppsala como la más destacada y usada para explicar el compromiso gradual de recursos con la internacionalización de la empresa. O dicho de otro modo, la internacionalización es (a) un proceso, que por lo tanto tiene diferentes etapas que definen su estado y el cambio o evolución de una etapa a otra, y (b) dado que la empresa carece de suficientes conocimientos del mercado internacional y es aversa al riesgo por naturaleza, tenderá a comprometer recursos en la internacionalización de manera gradual a lo largo del tiempo (Johanson and Vahlne, 1977; Johanson and Wiedersheim, 1975, Figueira de Lemos et al., 2011). Esta teoría considera que las desventajas de ser foráneo, de ser externo a las redes comercio internacional establecidas, la distancia cultural y psíquica entre los países de origen y destino, y el binomio incertidumbre-conocimiento del mercado determinarán conjuntamente la elección de un compromiso gradual con los mercados internacionales. No obstante, surge otra teoría que cuestiona la validez universal de esa aproximación gradual y secuencial e, incluso, llega a plantearse si las empresas siguen realmente un proceso o si adoptarán un estado de internacionalización y no progresarán a través de ningún proceso. Esencialmente, esta otra teoría trata de explicar por qué algunas empresas buscan un alto grado de involucración desde el mismo inicio del proyecto empresarial y permanecer en modos de alto compromiso durante toda su vida organizativa, incluso sin la necesidad de primero explotar el mercado doméstico como paso previo a la internacionalización. Dicha teoría se denominó como el patrón de internacionalización de nuevas empresas internacionales – *International new venture-INV* en su acrónimo inglés– y el de empresas nacidas globales – *Born Globals-BGs*– (Oviatt and McDougall, 1994; 1999; Madsen and Servais, 1997; Rialp et al., 2005). En estos casos, el principal determinante parece ser la velocidad de la industria en la que compiten las empresas –este fenómeno se ha estudiado fundamentalmente en industrias de alta tecnología y sectores intensivos en conocimiento, aunque no de manera exclusiva (Rialp et al., 2005)–. Este enfoque ha puesto el foco sobre la experiencia en el mercado internacional del emprendedor-directivo, la cual acelera la internacionalización incluso sin que exista necesidad de explotar primero el mercado doméstico, ya que dichos

directivos y a poseen conocimiento sobre la industria y el mercado internacional. Desde la perspectiva de emprendimiento internacional, Rialp et al. (2005) encontraron que la mayoría de las explicaciones teóricas de este comportamiento se han fundamentado profundamente en la interacción entre las características y actitudes del emprendedor-fundador-directivo y el entorno en el cual operará la nueva empresa internacional.

La capacidad de los directivos de PEs para comprender los efectos de los retos del mercado internacional, como por ejemplo de la globalización, es una parte esencial de como las PEs construyen sus ventajas competitivas. Dado que se basa en las habilidades, actitudes y comprensión del directivo, no se puede cambiar tal capacidad de manera instantánea (Kozhevnikov, 2007). En PEs, el directivo-propietario es el decisor clave y, en la mayoría de ocasiones, el único decisor quien, por lo tanto, es la causa y explicación del proceso de toma de decisiones sobre internacionalización (PTDI), proceso que es dirigido por el comportamiento del directivo-propietario que tiende a ser persistente una vez que elige un curso de acción (Hambrick and Mason, 1984; Acedo and Jones, 2007). En un contexto organizativo, se entiende que la cognición es la manera en que el emprendedor-directivo se aproxima a la comprensión de las decisiones a tomar (Mitchell et al., 2002). En la literatura sobre emprendimiento, la cognición se refiere a cómo los individuos perciben el entorno de tal manera que algunos percibirán y reconocerán la existencia de una oportunidad de negocio, evaluarán alternativas y, finalmente, decidirán fundar una empresa (Forbes, 1999; Grégoire et al., 2011; Baldacchino et al., 2015).

La adición de la Teoría psicológica de Procesamiento Dual sobre cómo la cognición de los individuos procesa la información para alcanzar una decisión ayudará a proporcionar una explicación suplementaria de los fundamentos conductuales de la heterogénea internacionalización. Esta teoría establece que hay dos razonamientos cognitivos que actúan cuando se decide (Epstein, 1994; Kahneman and Frederick, 2002; Strack and Deutsch, 2004; Healey and Hodgkinson, 2014). A partir de la percepción de estímulos externos, el Sistema-X (basado en la experiencia) proporciona respuestas inmediatas que son automáticas, inconscientes y que no requieren esfuerzo por parte del sujeto. Por otro lado, el Sistema-C (racional) interviene mediante la evaluación analítica del estímulo para alcanzar una conclusión deliberada y consciente, que requiere de bastantes recursos cognitivos. Sabemos que los decisores con una tendencia natural a usar más el proceso cognitivo experiencial de su Sistema-X están fuertemente dominados por su experiencia adquirida que les proporciona ese entendimiento instantáneo –ese saber sin saber cómo o por qué lo saben– y que son capaces de detectar de manera automática nuevas oportunidades de negocio–i.e. usan su experiencia intuitiva–(Sadler-Smith, 2016). Es más, perciben un mayor oportunidades y son capaces de actuar rápidamente en

situaciones complejas de alta incertidumbre en comparación con decisores que confían más en el Sistema-C (Kickul et al., 2009; Chaston and Sadler-Smith, 2012). En cambio, el Sistema-C sigue un proceso más calculado y lógico, racional, que requiere más tiempo para investigar y obtener más información que reduzca la incertidumbre de lo desconocido y que, en muchas ocasiones, lleva a procrastinar la decisión.

Así, esta tesis doctoral razona sobre cómo la inclusión de la Teoría de Procesamiento Dual en las teorías más destacadas de internalización ayudará a entender en mayor profundidad la heterogeneidad de patrones de internacionalización que una PE puede seguir. Primero, proporcionaremos argumentos a favor de que la cognición directiva juega un papel y afecta a la relación entre la percepción del mercado objetivo internacional y la decisión que la PE toma. Segundo, profundizaremos en qué medida la cognición afecta a la intención internacionalizadora para, finalmente, presentar un modelo sobre dicha influencia que ayudará a proponer un conjunto de mejoras en todo el proceso de toma de decisiones sobre internacionalización en las PEs.

Animado por el creciente número de aspectos que cuestionan la adopción de un modelo u otro de internacionalización, el objetivo de esta tesis doctoral es profundizar en las características cognitivas del directivo-propietario y en su impacto sobre el comportamiento internacional de las PEs. A la vista de las crecientes críticas sobre la existencia de comportamientos heterogéneos en la internacionalización de empresas, esta tesis doctoral se guía por las siguientes cuestiones de investigación:

- **¿Cómo afecta el razonamiento cognitivo del directivo a la intención internacionalizadora?**
- **¿Cómo afecta el razonamiento cognitivo del directivo a la decisión de internacionalizarse?**
- **¿Afecta el razonamiento cognitivo del directivo a los resultados del proceso de internacionalización de la pequeña empresa?**
- **¿Podría este enfoque ser incluido exitosamente en las teorías existentes para explicar todos los patrones de internacionalización observados?**

Para afrontar estas cuestiones, esta tesis doctoral se estructura en dos partes que buscan desarrollar el marco del PTDI, el cual ayudará a encontrar la explicación definitiva a dichos comportamientos internacionales heterogéneos.

El estudio 1 se desarrolló entre estudiantes de universidad de grados relacionados con la empresa -futuros emprendedores y/o directivos- en el que hemos incluido métricas del uso de ambos sistemas cognitivos bajo el marco de la Teoría de Comportamiento

Planificado-TCP de Ajzen (1991) y hemos adaptado la métrica de Liñán y Chen (2009) que mide la intención emprendedora para evaluar dicha intención en el ámbito internacional (intención emprendedora internacional-IEI). El objetivo principal de este estudio es verificar si y hasta qué punto la inclusión del razonamiento cognitivo en el modelo de intenciones puede ayudar a explicar la decisión de iniciar una nueva empresa internacional. La comparación de estos resultados con investigaciones anteriores sobre la intención emprendedora entre estudiantes universitarios proporcionará una evidencia adicional sobre en qué medida la cognición importa cuando se trata de la IEI bajo condiciones de extrema incertidumbre y de ausencia de conocimiento internacional basado en la experiencia. Los modelos de intenciones han demostrado tener un extremadamente elevado poder explicativo de la decisión de emprender (Krueger et al., 2000). Este puede ser el caso también de las PEs dado que una mayoría de directivos-propietarios suelen decidir emprender un negocio con bastante antelación previa a su involucración en un escaneo del entorno en busca de oportunidades. La intención es el estado cognitivo que precede a la acción (Ajzen, 1991; Krueger, 2003). Por lo tanto, esta aproximación puede ofrecer resultados fructíferos en la investigación de la IEI bajo condiciones de alta incertidumbre.

El estudio 2 continua con la investigación a partir del conocimiento que obtuvimos sobre en qué influían los sistemas cognitivos en la IEI. Así, diseñamos un estudio cualitativo cuya unidad muestra fueron los directivos-propietarios de PEs que se hubiesen internacionalizado recientemente. De esta manera, tratamos de obtener información sobre el cómo, y no tanto sobre el cuánto. Así, siguiendo la filosofía de la *Ground Theory*, nos entrevistamos con dichos directivos-propietarios hasta que no surgieron nuevos contenidos, hecho que sucedió en la sexta entrevista. Como resultado de este estudio cualitativo, ofreceremos un modelo conceptual que ilustrará y guiará futuros estudios sobre cómo el sistema cognitivo del directivo influye en las etapas del proceso de toma decisiones internacional en PEs.

REVISIÓN DE LA LITERATURA QUE DA SOPORTE A ESTA TESIS DOCTORAL

Para investigar estas cuestiones, esta tesis revisa el estado del arte de estas dos grandes áreas, internacionalización y aspectos del razonamiento cognitivo del directivo. Así, en un primer apartado se revisaron las teorías dominantes que explican la internacionalización de nuevas empresas, esto es, el modelo de internacionalización gradual de Uppsala (Johanson y Vahlne, 1977, 2009; Johanson and Wiedersheim, 1975), y el modelo de nuevas empresas internacionales-INV's (Oviatt y McDougall, 1994; 1999). Posteriormente, se revisan los aspectos relativos al directivo como suplemento a la teoría

de toma decisiones, incluyendo la teoría de procesamiento dual. En un tercer apartado, se interseccionan ambas aproximaciones para dar lugar a una aplicación potencial del razonamiento cognitivo del directivo para explicar la toma de decisiones sobre internacionalización en PEs. Fruto de todo ello se presentan las 6 hipótesis de trabajo que son contrastadas posteriormente.

A pesar de que el razonamiento cognitivo del directivo ha llamado crecientemente la atención tanto de estudiosos como de directivos por igual en el área de emprendimiento, todavía es un aspecto virtualmente ausente en el campo de la internacionalización. Estos tópicos considerados de forma separada –cognición del directivo, teoría de la internacionalización, emprendimiento internacional–, han ido ganado la atención de los estudiosos a lo largo de las últimas décadas. Sin embargo, la cognición del directivo ha sido muy pocas veces introducida en las principales corrientes de investigación de la internacionalización y del emprendimiento internacional. Una búsqueda en la Web of Science-WoS en los últimos diez años proporciona esta evidencia. La estrategia de búsqueda incluyó aspectos como (“cognit* AND manager*”), AND (“internationalization” OR “internationalization process”) and the unit of analysis was “small enterprise” or “small venture”. El proceso de internacionalización ha ido sumando unos 60-70 artículos por año, mientras que la cognición del directivo ha tenido similares registros, con una punta destacable desde el 2015. En cambio, la intersección de ambos tópicos apenas muestra 8 trabajos entre dichas fechas. En resumen, se puede decir que la cuestión investigada es de creciente interés por separado y su originalidad radica en el reducido número de trabajos que hayan aplicado la cognición del directivo al área de internacionalización y, más concretamente a las decisiones de internacionalización.

Desde el área de emprendimiento, se sabe que lo que realmente distingue a un emprendedor exitoso es la forma en que procesa la información en determinadas situaciones. La definición de cognición en esta área comúnmente incluye estructuras de conocimiento y mapas mentales, esto es, cómo y por qué algunos deciden iniciar una nueva empresa y hacerla crecer, mientras que otros no (Mitchell et al., 2002; Mitchell et al., 2002b). Entre los estudiosos de la internacionalización, no ha sido hasta recientemente que los sistemas cognitivos han atraído su atención para explicar la intención emprendedora internacional (p. ej. Sommer, 2010; Sommer and Haug, 2011). Hasta donde nos ha sido posible indagar, tan solo Sadler-Smith (2016) desarrolló un marco teórico de trabajo en el ámbito de la teoría de emprendimiento que incorpora la explicación de cómo los sistemas cognitivos afectan a cada etapa del intento emprendedor. En cambio, la ausencia de un marco de trabajo en la literatura sobre internacionalización puede deberse a que ya existen otros factores conductuales que han sido adoptados masivamente para explicar la internacionalización, los cuales además están presentes en algunas de las teorías dominantes. Entre dichos factores, está el hecho de que cuando la empresa pasa a competir en el

mercado internacional por primera vez, debe enfrentarse a diversos niveles de incertidumbre (desconocimiento de aspectos generales del país, del mercado de destino, de la evolución futura de las ventas allí...) la cual es mayor que en el mercado doméstico en el cual ha estado operando (Figueira de Lemos et al., 2011). Estos aspectos conductuales sobre el riesgo a la incertidumbre y al riesgo llevan a las empresas a seguir una internacionalización gradual. Según estos últimos autores, otro aspecto a considerar es que no es posible ganar conocimiento basado en la experiencia de manera de manera instantánea, dado que debe transcurrir un cierto tiempo entre que se adopta e implementa una decisión y se empiezan a obtener retornos que permite una retroalimentación y aprendizaje.

Esta tesis proporciona evidencia empírica a un número de cuestiones que recientes estudios han destapado en el área de cognición del directivo (Forbes, 1999; Kahneman and Frederick, 2002; Simon, 1987; Grégoire et al., 2008; Akinci and Sadler-Smith, 2012), también a aspectos señalados por recientes investigaciones en su intersección con la internacionalización (Maitland and Sammartino, 2015a) y con la teoría de toma de decisiones (Francioni et al., 2015; Laureiro-Martínez and Brusoni, 2018). Estos autores, entre otros, sugirieron que debía investigarse hasta qué punto la cognición de los individuos influye en sus decisiones para iniciar una empresa internacional o para internacionalizar una ya existente, además de impactar en el proceso de toma de decisiones posterior. Existe la posibilidad de que el decisor se base más en su Sistema-C y confíe más en su análisis detallado, o bien que pueda basarse en su intuición experiencial (Sistema-X), el cual es más propenso al sesgo cognitivo por sus propias características – automático, inmediato, inconsciente-. Éste último se basa en la experiencia adquirida en un entorno que debe ser altamente válido, es decir, debe ofrecer oportunidades para reflexionar sobre esa decisión inmediata y sobre su resultado para que pueda posteriormente replicarse (Kahneman, 2003). Si el nuevo entorno no es similar al original donde fue tomada dicha decisión basada en el Sistema-X que posteriormente permitió el aprendizaje, entonces hay altas probabilidades de que la decisión sea errónea. Y aquí radica uno de los principales problemas: la percepción del directivo sobre el grado de validez del nuevo mercado y su similitud respecto al mercado doméstico o un mercado internacional ya conocido. Si el directivo interpreta erróneamente esta información sobre el mercado internacional, la decisión tomada pondrá en riesgo el proyecto empresarial (Maitland and Sammartino, 2015a).

De hecho, Buckley (2016) en su revisión histórica sobre la toma de decisiones de internacionalización y bajo un enfoque de racionalidad limitada, encontró que estos decisores están tan sólo parcialmente guiados por el razonamiento analítico. Como resultado de la revisión de la literatura realizada, cuatro aspectos se destacan en el estudio de aspectos conductuales del directivo cuando se aplican a la internacionalización: (1) las

características del patrón de internacionalización escogido por la empresa al inicio, (2) la percepción que el directivo tiene del mercado internacional de destino, (3) la actitud del decisor respecto a la decisión a tomar (aversión al riesgo vs. riesgo controlado), y (4) las características cognitivas del directivo (analítico-razional vs. impulsivo-intuitivo).

HIPÓTESIS DE INVESTIGACIÓN

Para el estudio de las cuestiones de investigaciones planteadas, esta tesis doctoral ha planteado dos conjuntos de hipótesis. Primero, se plantean las hipótesis de trabajo sobre hasta qué punto los sistemas cognitivos de razonamiento del directivo pueden jugar un papel sobre la intención emprendedora internacional, esto es, cuánto puede afectar y sobre qué variables puede tener impacto, bien sea de manera directa o indirecta. De observarse algún impacto en ese primer conjunto de hipótesis, entonces se plantean hipótesis de trabajo sobre cómo dichos sistemas cognitivos de razonamiento directivo pueden afectar a cada etapa del proceso de toma decisiones.

Para el primero conjunto de hipótesis se adoptó la Teoría del Comportamiento Planificado-TCP de Ajzen (1991), en lugar de alternativas como el enfoque de Shapero (1982) sobre el evento emprendedor. Este último enfoque señalaría que, en la etapa de incubación de la idea o proyecto emprendedor, existe un instante (el evento) que hace que el emprendedor decida dar el último paso y crear la empresa; a veces, incluso no incuba la idea, sino que se produce un evento significativo en la vida del emprendedor que le lleva a emprender. Sin embargo, el modelo de Ajzen considera que el emprendedor, al igual que en muchas otras grandes decisiones, planifica ese comportamiento con antelación en el tiempo. Krueger et al. (2000) demostró que ambos modelos son muy similares en sus predicciones y capacidad explicativa. Sin embargo, autores como Kickul et al. (2009) o Liñán y Chen (2009) señalan que los emprendedores, sobre todo ante situaciones de incertidumbre en los posibles resultados, suelen planificar este comportamiento, incluso aunque dicho evento exista. Por lo tanto, en la toma de decisiones sobre la primera internacionalización, en la que existe una alta incertidumbre sobre el resultado potencial, parece que la empresa seguirá un comportamiento planificado, incluso aunque el evento puedan ser solicitudes esporádicas de exportación.

Así, el primer conjunto de hipótesis estudiará el efecto de hasta qué punto los sistemas de razonamiento cognitivo del potencial emprendedor tienen impacto sobre las variables del modelo TCP. Esta teoría establece que el comportamiento está explicado por la intención y que a intención anteceden la actitud hacia el comportamiento, la percepción de normas sociales sobre el comportamiento y la percepción de autocontrol, esto es, si se

será capaz de mantener bajo control tanto el comportamiento como sus resultados. Esta tesis añade a dicho modelo los sistemas cognitivos de razonamiento. Así, se definen las siguientes hipótesis en el momento en que un posible emprendedor evalúa emprender una nueva empresa internacional:

H1a: cuanto mayor es el uso del Sistema-X, más favorable será la actitud para iniciar una nueva empresa internacional.

H1b: cuanto mayor es el uso del Sistema-C, menos favorable será la actitud para iniciar una nueva empresa internacional.

H2a: cuanto mayor es el uso del Sistema-X, más positiva será la percepción de normas sociales respecto a iniciar una nueva empresa internacional.

H2b: cuanto mayor es el uso del Sistema-C, más negativa será la percepción de normas sociales respecto a iniciar una nueva empresa internacional.

H3a: cuanto mayor es el uso del Sistema-X, más positiva será la percepción de autocontrol del comportamiento iniciar una nueva empresa internacional.

H3b: cuanto mayor es el uso del Sistema-C, más negativa será la percepción de autocontrol del comportamiento iniciar una nueva empresa internacional.

Como hipótesis adicionales, se establecen dos que son necesarias para evaluar el impacto puramente mediador de los tres antecedentes en la relación sistemas cognitivos-intención:

H4a: el Sistema-X no tiene efecto directo sobre la intención emprendedora internacional.

H4b: el Sistema-C no tiene efecto directo sobre la intención emprendedora internacional.

Adicionalmente, se plantea una hipótesis en competencia sobre el posible efecto interactivo que podrían tener ambos sistemas cognitivos sobre la intención emprendedora internacional, la cual da lugar a dos sub-hipótesis:

H5: el equilibrio en el uso de ambos sistemas cognitivos tendrá un impacto sobre la intención emprendedora internacional del individuo, tal que:

H5a: la predominancia del uso de un sistema provocará una mayor intención emprendedora internacional

H5b: el balance de ambos sistemas provocará una mayor intención emprendedora internacional

Respecto al segundo conjunto de hipótesis, se trata de plantear cómo ambos sistemas cognitivos de razonamiento pueden afectar a cada etapa del proceso de toma de decisiones sobre internacionalización y, concretamente, sobre si la PE escogerá un patrón de internacionalización gradual o uno de internacionalización acelerada. Se partió del modelo de 3 etapas ampliamente usado y refrendado en el ámbito de la economía y la psicología (Kahneman, 2003, Fellows, 2004). Las etapas son: percepción de estímulo y generación de opciones, evaluación de opciones, y toma de decisión final. Así, las hipótesis son:

H6: el razonamiento cognitivo del decisor tendrá un impacto sobre el patrón de internacionalización de tal manera que:

H6a: El Sistema-X acelerará el proceso de toma de decisiones de internacionalización

H6b: El Sistema-C acelerará el proceso de toma de decisiones de internacionalización

METODOLOGÍA PARA EL CONTRASTE EMPÍRICO

Para el estudio 1, se decidió desarrollarlo de manera cuantitativa en virtud de las cuestiones planteadas –esencialmente si hay un impacto significativo de los sistemas cognitivos de razonamiento del directivo sobre la internacional de internacionalizarse. Así, se usó la Teoría de Comportamiento Planificado de Azjen (1991) con sus tres antecedentes (actitud hacia el comportamiento, percepción de normas sociales, percepción de autocontrol), a los que se añadieron el uso de ambos sistemas cognitivos. Las escalas de los tres antecedentes del modelo de TCP y la intención del comportamiento se basaron en los estudios de Autio et al. (2001) y Liñán y Chen (2009), con la pequeña adaptación que requería el comportamiento de nuestro estudio: en lugar de intención emprendedora, se añadió el matiz *internacional*. Por ejemplo, el ítem IEI10 decía “después de acabar mis estudios, . La escala de uso de los sistemas cognitivos para este estudio fue la de *Cognitive Style Index-CSI* de Allinson y Hayes (1996). A la vista de las críticas de Hodgkinson y Sadler-Smith (2003) sobre dicha escala, se modificó para incluir 7 puntos en la escala Likert. Posteriormente, se incluyeron los 22 ítems de la escala analítica en dicho constructo y los 16 de la escala intuitivo en ese otro constructo, a la vista de la importancia del sesgo provocado por el efecto “marco” o *framing* señalado por Kahneman y Tversky (1984). Es decir, si un ítem está redactado de forma positiva de forma que elevados valores señalarían un elevado uso del sistema-C, entonces dicho ítem se incluyó en ese constructo, y viceversa para el sistema-X. Se incluyeron también como variables de control el género y la edad.

La muestra final fueron 134 estudiantes de la Universidad de Vigo, de los cuales son mujeres el 58%, mientras el 42% restante son hombres. El 38,8% tenían entre 20 y 21 años, el 25,4% tenía entre 22 y 23 años y el restante 35,8% tenía más de 23 años. Esta muestra es representativa de los estudiantes de los dos últimos cursos del Grado en Economía y en Administración y Dirección de Empresas (Chi-cuadrado 0.04, por debajo del valor umbral crítico de 5.02, 1.d.f; α -nivel=0.05).

Para su evaluación, se planteó un sistema de ecuaciones estructurales que permitió evaluar las hipótesis establecidas. Por diversas razones, decidió usar mínimos cuadrados parciales mediante el software SMARTPLS v3.2.7 (Ringle et al., 2018). Una de las razones para esto es que dicho procedimiento es más robusto que un análisis de la matriz de varianzas-covarianzas en condiciones de pequeños y medianos tamaños muestrales (Chin, 1998), como fue nuestro estudio (134 casos). Otra de las razones es que se trata de un estudio exploratorio con insuficiente soporte teórico para las relaciones nuevas incluidas (uso de sistemas cognitivos), por lo que la rapidez en el cómputo y la ausencia de necesidad de que los datos sigan una determinada distribución es una ventaja de los sistemas de análisis de varianza frente a los sistemas basados en la matriz de varianzas-covarianzas (Barroso Castro et al., 2007). Este modelo de estimación está más orientado a la estimación de los parámetros, en lugar de a la predicción, por lo que resulta el más aconsejable para comprobar las hipótesis planteadas. El sistema se evaluó siguiendo estrictamente las recomendaciones de Hair et al. (2012) que, por orden, son: evaluar la adecuación muestral, evaluar el modelo externo (cargas factoriales en cada constructo) y evaluar el modelo interno. Se usó una aleatorización (*bootstrapping*) mediante 5000 remuestreos.

Para el estudio 2 se siguió un proceso *abductivo*, que es mezcla de deductivo e inductivo (Dubois and Gadde, 2002), en el que los autores van hacia delante y hacia atrás guiados por un enfoque de *teoría fundamentada en datos* (*grounded theory*). Esto, ha permitido obtener información sobre cómo los sistemas cognitivos tienen un impacto sobre etapa del proceso de toma de decisiones. Es más, este enfoque ha permitido detectar ciertos factores *estresantes* del proceso que pueden llevar a los decisores de pequeñas empresas a tomar decisiones de internacionalización heterogéneas o no consistentes -i.e. no siempre toman la misma decisión, depende de su percepción de esos factores estresantes. Para la elección de casos se siguió un procedimiento aleatorio consultando la base de datos SABI para realizar una preselección de casos potenciales en base a una serie de condiciones que debían cumplir. Primero, debían ser pequeñas empresas según el criterio de la Comisión Europea (2003): tener menos de 50 empleados y unas ventas totales o un activo total igual o inferior a 10 millones de euros. Segundo, debían de haberse internacionalizado en fechas recientes (en un plazo no superior a los últimos 3 años), de forma que los entrevistados pudiesen recordar fácilmente sus decisiones previas a la internacionalización. El

entrevistado, además, debía ser el propietario y el principal decisor sobre la internacionalización de la empresa.

Finalmente, se desarrollaron 6 entrevistas en profundidad, durando por término medio entre 40 y 90 minutos. Se usaron múltiples casos para desarrollar y reconectar los enlaces teóricos y, además, tratando de buscar una replicación de los resultados entre casos (Saunders et al., 2015). El cuestionario era semi-estructurado porque, aunque había preguntas como guía, era importante las palabras y semántica usada por los entrevistados, ya que puede ser indicativo de los mapas mentales cognitivos usados por los directivos, tal como señalaron en la investigación en estrategia Fiol y Huff (1992). En el cuestionario semi-estructurado de la entrevista se plantearon preguntas relativas a las principales decisiones de internacionalización, así como también se usó una escala para medir el uso de los sistemas cognitivos de razonamiento por parte del decisor cuando tomó las decisiones de internacionalización. Las principales cuestiones y métricas se tomaron de diversos estudios; por ejemplo, la primera entrada al mercado internacional respecto a la edad organizativa fue tomada de Laufs y Schwens (2014). La experiencia internacional fue tomada de Reuber y Fischer (1997) y de Takeuchi et al. (2005). La escala de uso de sistemas cognitivos fue la STSS de Novak y Hoffman (2009). Esta escala es diferente a la usada en el estudio 1 por dos razones. Primero, esta tesis trataba de averiguar qué escala podría reflejar mejor el uso de los sistemas cognitivos. Por ello, se decidió probar una escala diferente en este caso, ya que la escala de Novak y Hoffman (2009) contiene una marcada orientación a la tarea desempeñada. Dado que Phillips et al. (2016), en su meta-análisis sobre escalas psicométricas que miden el uso de los sistemas cognitivos, habían señalado que esta escala era la que mejor recogía el efecto específico de la tarea, se decidió probarla para el caso *tomar decisiones sobre internacionalización*. También se añadieron las variables de control habituales, tales como experiencia internacional del directivo, edad del entrevistado y de la empresa, sector de actividad, o género, entre otras. Las entrevistas fueron grabadas con el permiso de los entrevistados y se transcribieron inmediatamente durante las 24 horas siguientes a la entrevista. Para posibilitar la validación de la información mediante triangulación, se consultó la página web de la empresa, la información económico-financiera e informes disponibles en la base de datos SABI.

En la primera etapa de análisis de las entrevistas, se trató de unificar el contenido de las “unidades de pensamiento”, siguiendo a Gioia y Sims (1986). Estas unidades pueden ir desde palabras o grupos de palabras a varias frases enteras. En una segunda etapa de categorización, se agruparon unidades de pensamiento similares en categorías. Este proceso continuó hasta que se alcanzó el punto de saturación y todas las unidades de pensamiento relevantes estaban agrupadas en algún grupo o categoría.

PRINCIPALES RESULTADOS Y HALLAZGOS

En el estudio 1, tras el refinamiento y validación del modelo, se obtuvo en general un promedio de intención emprendedora internacional muy bajo (2,7 sobre 7) entre jóvenes potenciales emprendedores. Esto puede ayudar a entender en parte por qué las pequeñas empresas recientemente creadas no se internacionalizan al poco de su creación: en general, hay una baja predisposición a iniciar empresas internacionales desde el inicio, lo cual muestra el horizonte de alta incertidumbre que este primer estudio buscaba y necesitaba para el posterior contraste de hipótesis. Los estadísticos descriptivos de la muestra señalaron también que los estudiantes usan en promedio más su sistema-C de tipo analítico (media de 4,2 sobre 7) que su sistema-X de tipo intuitivo (3,5) –el t-test de diferencias de medias fue significativo y los intervalos de confianza al 95% después de 5000 remuestreos no se solaparon.

Respecto al contraste de hipótesis y respecto al impacto del sistema cognitivo-X se validaron las hipótesis H1a a un p -valor $<0,001$ (efecto positivo del Sis-X sobre una actitud más favorable para iniciar una nueva empresa internacional); H2a a un p -valor $<0,010$ (efecto positivo del Sis-X sobre una percepción más positivas de normas sociales respecto a iniciar una nueva empresa internacional); H3a con un p -valor $<0,005$ (efecto positivo de un mayor uso de Sis-X sobre una percepción más positiva de autocontrol sobre el comportamiento); y H4a sobre la ausencia de relación directa entre el uso del sistema cognitivo-X y la IEL.

Respecto al sistema cognitivo C, se observó que: no se acepta la H1b respecto al impacto del uso del Sis-C sobre una menos favorable actitud hacia el comportamiento (si bien su nivel de significación se aproximó al nivel de corte de 0,010); se observó un efecto contrario al predicho por la H2b, ya que el uso del Sis-C tiene un impacto positivo sobre una percepción de normas sociales más positiva (p -valor $<0,001$); se aceptó la H3b sobre el efecto del uso del Sis-C sobre una percepción más negativa de autocontrol sobre el comportamiento (p -valor $<0,010$); y se validó la ausencia de efecto directo del Sis-C sobre la IEL.

No se encontró un efecto interactivo significativo entre ambos sistemas cognitivos y su impacto sobre la IEL, por lo que el conjunto de hipótesis 5 se rechazaron (tanto la *a* como la *b*).

En este estudio 1, es interesante observar cómo los sistemas cognitivos inciden especialmente sobre la percepción de autocontrol. Aquellas personas que usan en mayor medida su Sis-C tienen una percepción de autocontrol menor, dado que necesitan permanente mayor información para reducir la incertidumbre en torno al

comportamiento. Esto es especialmente relevante en el caso de futuros emprendedores y su planificación de la internacionalización al inicio del proyecto emprendedor ya que, tal como el estudio 1 demuestra, en condiciones de alta incertidumbre y cuando los individuos enfatizan más su sistema cognitivo C que el X entonces su intención es inferior a la media general. Este comportamiento podría explicar por qué la mayoría de pequeñas empresas deciden no internacionalizarse al inicio del proyecto emprendedor.

Por otro lado, aquellas personas que enfatizan más su sistema cognitivo-X se muestran más optimistas que la media y que los individuos anteriores (enfatizaban el sistema-C) respecto a su futura capacidad de autocontrol. Así, en un contexto de alta incertidumbre, es posible que algunos emprendedores y directivos decidan internacionalizar su pequeña empresa si su confianza en el conocimiento experiencial es alta.

Con todo, aquellos individuos que usan ambos sistemas de manera equilibrada parecen compensar en cierta medida el exceso de optimismo que arroja el Sis-X con un Sis-C que trata de replantear las primeras impresiones con mayores análisis.

Los resultados obtenidos en el marco de la teoría de comportamiento planificado son similares a los ya obtenidos por Liñán y Chen (2009). Encontramos una ausencia de relación directa del constructo normas sociales, similar a lo ya hallado en investigaciones anteriores como es el caso de Garcia-Rodríguez et al. (2016) también entre estudiantes españoles. Esto puede relacionarse con lo sugerido por Krueger et al. (2000), quien señalaba que, en entornos de bajo a medio soporte institucional al emprendimiento, este constructo pierde su impacto directo sobre la intención. En nuestro estudio 1, la media de percepción de apoyo social era neutral (4,25 sobre 7), lo cual puede influir en dicha ausencia de efecto directo. Con todo, el modelo conjunto explica el 73% de la varianza en la IEI (r-cuadrado).

El estudio 2, de carácter cualitativo mostró como ambos sistemas cognitivos difieren en su impacto sobre las cuatro etapas del proceso de toma de decisiones sobre internacionalización. Así, los directivos con un marcado Sistema-X tendieron a acelerar su proceso de toma de decisiones, lo cual impactó también en un acortamiento del proceso de internacionalización. En cierta medida, parece que dichos directivos tienen unos umbrales de aceptación de riesgo e incertidumbre mayores. Son capaces de aceptar niveles relativamente elevados. En cambio, aquellos directivos con una marcada orientación a confiar en mayor medida en su Sistema-C tendieron a ralentizar este proceso de toma de decisiones y, consecuentemente, también ralentizó la internacionalización de la pequeña empresa.

En conjunto, parece que el Sis-X es responsable de la primera etapa, donde la percepción e inmediata identificación de oportunidades lleva a una primera lista de opciones. Aquellos directivos con un uso de este sistema exageradamente elevado incluso pueden saltarse posteriores etapas y tomar una decisión muy rápida que, posteriormente, tratan de justificar hacia atrás. Esto conlleva un sesgo de justificación en perspectiva. También puede influir la obtención de una solución basada en esta etapa inicial de percepción-opciones que sea mínimamente satisfactoria para el directivo. Algunos incluso llegaron a obtener tan sólo una única opción que, si es mínimamente satisfactoria, continua como decisión ya tomada que pasa luego a ser evaluada brevemente. Esto puede explicar el por qué algunas pequeñas empresas pueden internacionalizarse siguiendo un patrón INV: el directivo no tiene necesidad de llevar a cabo largos procesos de toma de decisión con complejas matrices de decisión en base a información contrastada. Le basta su *intuición* de negocio.

Por otro lado, los directivos con tendencia a usar su Sistema-C en mayor medida, siguieron las tres etapas de percepción/opciones-evaluación-toma de decisión. En cada etapa el Sistema-X influyó en proporcionar unas primeras alternativas e impresiones. Sin embargo, cada opción era evaluada detenidamente.

En ambos casos también pareció observarse que las pequeñas empresas tienden a internacionalizarse a mercados geográficos afines a sus productos/servicios. Es decir, mercados internacionales en los que sus productos/servicios apenas necesitan ningún tipo de adaptación al mercado local.

Los directivos basados en su Sis-X fueron capaces de aprender más rápidamente puesto que tienen más entrenado su sistema intuitivo basado en el conocimiento experiencial. No obstante, alguno también reconoció que se basaba más en prueba y error y que la flexibilidad de la empresa para afrontar estas cuestiones rápidamente le permitía hacerlo así. Esto está en línea con la idea de que la empresa es un reflejo de las características del directivo (Hambrick y Mason, 1984), aspecto que parece especialmente cierto en pequeñas empresas.

Como resumen de los hallazgos conjuntos de ambos estudios, se puede decir que ambos sistemas cognitivos influyen en la toma de decisiones sobre internacionalización en pequeñas empresas. Primero, parece que la combinación exacta en la que cada directivo usa ambos sistemas explicaría primero su percepción de autocontrol y su actitud general hacia el comportamiento internacionalizador. Dado que en las pequeñas empresas el decisor suele ser una única persona, esto hace que la empresa se comporte de manera similar a como lo hace el decisor. Dependiendo del equilibrio de ambos sistemas, el directivo puede ser excesivamente optimista y acelerar el proceso (Sistema-X) o puede

ralentizarlo si considera que el nivel de incertidumbre excede un determinado nivel aceptable, el cual es mayor entre los directivos que enfatizan el Sis-X. Esto permitió validar las hipótesis 6a y 6b: el sistema-X del decisor tiende a acelerar el proceso de internacionalización de las pequeñas empresas, mientras que el sistema-C tiende a ralentizarlo.

Esto es especialmente relevante en el caso de la consideración de la validez del nuevo mercado. Según Kahneman (2003), un entorno altamente valido es aquel en que es posible ser consciente de las señales que el entorno envía y la decisión automática tomada por el Sistema-X y hay suficiente tiempo para este aprendizaje basado en la experiencia se produzca. En el caso de la internacionalización, esto equivale a decir que cuando el directivo percibe que la validez del nuevo mercado internacional es similar a la validez del mercado doméstico, o de otro mercado internacional en el que ya operó, entonces el Sistema-X estará a cargo de la toma de decisiones inmediata. El riesgo potencial que esto conlleva es que dicho entorno puede ser realmente diferente o las señales no tienen las mismas implicaciones que en los mercados conocidos, por lo que llevaría a directivos que enfatizan su Sistema-X a cometer errores. En cambio, si el directivo percibe que ambos tipos de mercado (el conocido, y el nuevo mercado internacional) tienen una validez diferente, entonces el Sistema-C reaccionará para mostrar un comportamiento analítico de lo habitual, lo cual llevará a un comportamiento más gradual y ralentizado, que casa con la teoría de internacionalización gradual del modelo Uppsala. Con todo, la inclusión del uso de los sistemas cognitivos parece ofrecer una explicación plausible al por qué existen diferentes patrones de internacionalización entre las pequeñas empresas, incluso entre aquellas que se encuentran en sectores similares.

IMPLICACIONES PARA LA TEORÍA Y PARA LA PRÁCTICA

Según Farinas y Huergo (2015), las empresas jóvenes han sufrido más que otras en la crisis reciente. De hecho, entre 2009 y 2012, la tasa de supervivencia de las empresas creadas hace cinco años cayó diez puntos porcentuales (de 48,9% a 38,9%), más que en países del entorno. Resultados parecen señalar que, en general, España no es un país en el que exista una elevada percepción de referentes sociales en torno a la internacionalización de jóvenes empresas, lo que está en línea con los hallazgos de Liñán (2008). Esta cuestión de creciente preocupación jóvenes empresas puede ser explicado parcialmente por los hallazgos de Puig et al. (2014), quienes encontraron que las jóvenes nuevas empresas textiles que se habían internacionalizado durante sus primeros diez años tenían una mayor probabilidad de supervivencia que las que permanecieron como puramente domésticas. Sin embargo, dichos autores encontraron que una mayoría de empresas de esa muestra

habían decidido no internacionalizarse o permanecer como empresas domésticas durante años. Por consiguiente, existe una necesidad de incrementar la intención emprendedora entre los decisores de empresas. Resultados indican que la ausencia de intención internacional entre jóvenes potencialmente emprendedores está influida por una percepción de que existe un nivel de referentes sociales normativos modesto, por su bajo nivel de percepción de ser capaces de controlar ese comportamiento y, en general, por su baja actitud hacia la internacionalización temprana. No obstante, cuando el decisor de la empresa es capaz de aprender rápidamente en base a su experiencia durante el proceso de toma de decisiones entonces el comportamiento de ir más allá de las fronteras domésticas a través de prueba y error parece un comportamiento razonable y que ofrecerá resultados positivos. Sin embargo, existen sesgos cognitivos y riesgos potenciales bajo este comportamiento en busca de una solución satisfactoria que puede ser subóptima. El riesgo proviene de una excesiva confianza en la intuición y en el conocimiento experiencial que puede llevar a asumir que un entorno es igualmente válido que uno ya conocido, cuando en realidad no lo es. Este tipo de comportamiento enfatiza la rápida internacionalización, pero a costa de relajar la búsqueda de información y la realización de análisis adicionales que reducirían la incertidumbre relativa a lo desconocido sobre ese mercado internacional o a lo aparentemente conocido que no lo es. Para adoptar esta aproximación de rápida internacionalización, los emprendedores deben aprender a reconocer cuándo deben confiar en cada uno de los razonamientos cognitivos, en lugar de mantenerse como empresas puramente domésticas durante muchos años. Deben focalizarse sobre todo a aprender en base a su experiencia y a saber identificar cómo las señales provenientes de su entorno les llevaron a tomar determinadas decisiones de éxito o de fracaso, esto es, a incrementar su capacidad de aprendizaje basado en la experiencia.

Todavía no están claros el tipo de intervenciones requeridas para que los directivos sean capaces de pasar de un juicio analítico a uno intuitivo basado en la experiencia cuando toman decisiones que conllevan resultados altamente inciertos. Las herramientas analíticas enseñadas en las facultades a futuros gestores pueden explicar parcialmente la ausencia de intención internacional entre futuros directivos. Esto puede exacerbar el perfil analítico de este grupo poblacional. En cambio, raras veces se incluyen algún tipo de enseñanza de capacidades intuitivas. Tal como Kahneman (2003) ya había señalado, los individuos deben tener adecuadas oportunidades para aprender y deben estar en entornos altamente válidos para que el aprendizaje basado en la experiencia tenga lugar y pueda ser exitoso. Un entorno de enseñanza universitaria puede perfectamente ser un medio seguro para este tipo de formación sobre razonamiento experiencial en decisiones de internacionalización.

Así, para incrementar las ratios de supervivencia de jóvenes y pequeñas empresas que se esfuerzan por internacionalizarse, es necesario desarrollar formación específica

para los decisores-directivos de este proceso. Esta formación debería de incluir contenidos específicos sobre cómo identificar indicios del entorno que pueden implicar oportunidades de negocio internacional (énfasis en el Sistema-X). Los directivos están sujetos a una miríada de sesgos cognitivos durante el proceso de toma de decisiones. Ser capaces de identificar estos sesgos potenciales de manera anticipada será beneficioso para que puedan realizar predicciones de negocio más afinadas. Dado que la internacionalización es un proceso de toma de decisiones paralelo al proceso psicológico, entonces la habilidad del decisor para percibir y rápidamente identificar y evaluar la oportunidad internacional incrementará las probabilidades de supervivencia de la pequeña empresa.

Una de las implicaciones prácticas más críticas es la posibilidad de que los sistemas cognitivos de algún directivo puedan haber obviado alguna opción por su experiencia anterior sesgada. Así, los decisores que enfatizan su sistema-X tenderán a aplicar en mercados internacionales el mismo esquema mental que en mercados domésticos, por lo que puede estar sesgado por su exceso de optimismo. Al contrario, aquellos decisores que se basan sobre todo en su sistema-C pueden quedarse paralizados por su necesidad de mayor información y posterior análisis a cada etapa del proceso de toma de decisiones, lo que retrasaría sus decisiones incluso cuando los factores estresantes del entorno claman por una acción internacional inmediata. Por lo tanto, el reconocimiento de la influencia de los sistemas cognitivos sobre las decisiones y el uso equilibrado de ambos sistemas cognitivos deberá de ayudar a superar los peligros potenciales de cualquier predominancia cognitiva en todas y cada una de las etapas del proceso de toma de decisiones (percepción-opciones, evaluación y elección).

CONCLUSIONES, LIMITACIONES Y FUTURAS INVESTIGACIONES

Esta tesis doctoral ha proporcionado evidencias empíricas sobre en qué medida los sistemas cognitivos influyen en la intención internacional y cómo es que estos sistemas cognitivos pueden influir en el proceso de toma de decisiones sobre internacionalización en pequeñas empresas. Para ello, se han realizado dos estudios. Uno cuantitativo sobre una muestra de estudiantes universitarios de últimos años, puesto que se requería evaluar las relaciones en condiciones de elevada incertidumbre sobre el resultado futuro. En dicho estudio se evaluó en qué medida el uso de ambos sistemas de razonamiento cognitivo – uno más analítico, el Sistema-C; otro más intuitivo basado en la experiencia, el sistema-X– afectaba a los tres antecedentes de la teoría de comportamiento planificado de Ajzen (1991), esto es, la actitud hacia el comportamiento (iniciar una nueva empresa internacional en esta tesis), la percepción de referentes o normas sociales sobre ese

comportamiento y la percepción de autocontrol presente y futuro tanto del comportamiento como de los resultados derivados. Se trata de explicar la intención emprendedora internacional. El segundo estudio, de tipo cualitativo, trataba de profundizar en el cómo dichos sistemas cognitivos ejercían una influencia en el proceso de toma de decisiones sobre internacionalización. Aquí se recurrió a una aproximación abductiva, en el que los investigadores van hacia adelante y hacia atrás, tratando de encontrar una explicación teórica sobre la información extraída y clasificada, mientras que se trata también de buscar una replicación de dicha teoría buscando nuevos casos.

Para comprender los resultados del estudio 1, se debe tener en cuenta el contexto en el que se contrastaron las hipótesis. Primero, la muestra fueron estudiantes de universidad de últimos años de titulaciones afines a Ciencias Empresariales, esto es, futuros directivos y/o emprendedores. Esta elección responde a la necesidad de contrastar las hipótesis en un contexto de alta incertidumbre sobre el comportamiento y sus resultados. Esto se vio validado por el hecho de que los encuestados tenían una muy baja intención emprendedora internacional. También es necesario señalar, en promedio, la baja actitud hacia el comportamiento y la baja percepción de autocontrol. En cambio, el promedio de percepción de referentes o normas sociales rondó los valores neutrales. En este contexto, se destaca el efecto negativo del Sistema-C y el efecto positivo del Sistema-X sobre la percepción de autocontrol. El tamaño del efecto parece ser muy similar, por lo que la existencia de una predominancia cognitiva de uno u otro tipo tendría impacto indirecto sobre la intención emprendedora internacional-IEI. También se encontró que el Sistema-X tiene un efecto positivo sobre la actitud hacia el comportamiento lo que, unido a lo anterior, hizo que su efecto indirecto fuese significativamente positivo.

Respecto al estudio 2, se puede concluir que ambos sistemas de razonamiento cognitivo afectan de manera diferente en cada etapa del proceso de toma de decisiones sobre internacionalización. El sistema X tiende a actuar más etapas de percepción-opciones, mientras el sistema-C actúa en mayor medida en la etapa de evaluación. En la etapa final de elección, hay cierto equilibrio. No obstante, los directivos que muestran una predominancia en el uso de uno u otro sistema lo mantienen durante todo el proceso. Cada uno tiene sus peligros potenciales. De hecho, los directivos con un mayor uso del Sistema-C tendieron a ralentizar su proceso de toma de decisiones y, por consiguiente, la internacionalización de la empresa, mientras que los directivos que confiaban más en el Sistema-X lo aceleraron. También se encontró un caso en el que el exacerbado uso del Sistema-X por parte del decisor, le llevó a pasar directamente a la elección final sin pasar por las etapas previas, cayendo luego en el sesgo de tratar de justificar que la elección fue buena.

Todo esto es muy relevante para entender por qué se pueden producir diversos patrones de internacionalización entre nuevas empresas de pequeño tamaño. Dependiendo del uso de los sistemas de razonamiento cognitivo que el decisor emplee, la pequeña empresa puede tener una mayor o menor predisposición a salir al mercado internacional ya desde el propio inicio del proyecto empresarial. Esto tiene también otra lectura a modo de conclusión: en las pequeñas empresas que deciden internacionalizarse más temprana y aceleradamente, es muy probable que haya un decisor con una cierta orientación a confiar en su Sistema-X. En cambio, en aquellas que lo hacen tardíamente y de manera gradual, es muy probable que haya un decisor con una mayor orientación a confiar su Sistema-C.

Esta tesis contribuye a la literatura sobre internacionalización y emprendimiento internacional mediante la incorporación del razonamiento cognitivo de los directivos. Esto permite entender mejor el por qué se observan patrones de internacionalización diferentes entre empresas que son relativamente similares. La evidencia de esta tesis permite concluir que dicho razonamiento cognitivo influye en el patrón de internacionalización que la empresa escoge.

Existen algunas limitaciones que se deben tener en cuenta a la hora de interpretar correctamente estas conclusiones. Primero, el ámbito geográfico de ambos estudios ha estado restringido a España. En el caso del estudio 1, se trataba de estudiantes que, posiblemente, no hayan todavía reflexionado sobre la posibilidad de emprender, y menos sobre la posibilidad de hacerlo internacionalmente. Sin embargo, esta alta incertidumbre ha permitido evaluar el impacto de los sistemas cognitivos en dicho contexto. El hecho de ser percibido el contexto como relativamente neutral en términos de soporte social al emprendimiento internacional, hace que la posible extensión de estos hallazgos sea limitada sólo a este tipo de contextos. El limitado número de casos también debe llevar a la interpretación de resultados con cierta precaución, puesto que la adición de más casos podría hacer variar la precisión de las estimaciones, aspecto que debe ser llevado a cabo en futuras investigaciones.

En el estudio 2, se ha tratado de encontrar casos de pequeñas empresas recientemente internacionalizadas que hubiesen seguido patrones diferentes de internacionalización o, al menos, que hubiese habido más diversidad entre las variables de control. Sin embargo, no ha sido posible encontrar casos de directivos con un perfil cognitivo analítico y empresas con una internacionalización gradual en industrias de alta velocidad. Posiblemente, puede haber estado influido por la reciente crisis. Kahneman y Tversky (1979), en su Teoría de la Prospectiva respecto a cómo los individuos toman las decisiones, señalaron que tendemos a tomar mayores riesgos cuando se trata de evitar pérdidas potenciales que cuando se trata de aprovechar oportunidades potenciales. La

crisis parece haber exacerbado el comportamiento de rápida internacionalización tras la creación entre pequeñas empresas en España, lo cual puede haber llevado a algunas a desviarse de la teoría normativa de internacionalización gradual y secuencial. También existe la limitación de encontrar empresas de pequeño tamaño que hayan adoptado modalidades de internacionalización de alto compromiso internacional (inversión directa en el exterior), probablemente influido por las limitaciones derivadas de ese tamaño relativamente pequeño. Futuras investigaciones deberán ampliar el espectro de empresas entrevistadas.

A la vista de las limitaciones y de los resultados obtenidos, diversas líneas de investigación futuras se abren. Primero, se debe investigar si existe algún tipo de encaje óptimo entre el sistema de razonamiento cognitivo del directivo y el patrón de internacionalización que la empresa desea desarrollar. Existen dos posibilidades. Una en la que predomine la necesidad de un entorno altamente válido para poder usar el sistema cognitivo X. En ese caso, si la empresa desea internacionalizarse en mercados muy diferentes a los ya conocidos, entonces el mejor tipo de directivo sería uno con una predominancia del sistema-C. Por otro lado, es posible que, si la empresa necesita internacionalizarse rápidamente, entonces el mejor perfil sería el de un directivo con predominancia de su sistema-X, el cual es más rápido en el proceso de toma de decisiones. Hay, por tanto, argumentos a favor y en contra de ambas posibilidades, por lo que se requieren investigaciones tanto cuantitativas como cualitativas.

Por otro lado, durante las entrevistas se ha destacado especialmente el papel de la percepción de riesgo y el impacto que los sistemas cognitivos podrían tener, así como la idea de planificar a corto versus a largo plazo. Aquí se abre la posibilidad de que el sistema cognitivo del directivo pueda interrelacionarse con su búsqueda de recompensa a largo o corto plazo. Frederick (2005), encontró que aquellos individuos que usaban en mayor medida su sistema-X tendían a aceptar juegos en los que había que descontar los resultados inciertos en el corto plazo más que los individuos que usaban más su sistema-C. Por lo tanto, parece abrirse la puerta a la posibilidad de que las empresas que se internacionalizan temprana y aceleradamente lo hacen porque buscan una recompensa a corto plazo, mientras que aquellas que lo hacen a largo plazo podrían internacionalizarse de manera más lenta y gradual. Si a esto se une la relación entre el uso de los sistemas X y C y el patrón de internacionalización hallado en nuestro caso, se abre una intrigante vía para ofrecer una explicación más afinada sobre por qué se producen ese tipo de patrones de internacionalización.