

## **INTERNATIONALIZATION PROCESS AND DECISION-MAKING: AN APPROACH THROUGH THE LENS OF THE MANAGER COGNITION**

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### **ABSTRACT:**

*The influence of several environmental and organizational factors on the decision making process of international business-IB have been extensively investigated over the last decades. However, the micro-foundations of the cognitive features of the decision maker and their impact on the organization's strategic decisions are still an unexplored area when discussing the process of internationalization. In this paper, this internationalization process decision making is examined under the umbrella of the intertwined relations between environment, organization and manager's cognitive style. The aim of this paper is to reflect of the role of the manager's cognitive style on the process of filtering information from the international business environment in order to create better internationalization strategic decisions. Under the socio-cognitive approach of the dual-process theory, this study explores the role of System-X (emotional, intuitive, automatic reasoning) and System-C (analytical, conscious, deliberate reasoning) on the IB decision making process. Finally, we open future research avenues for digging deeper in the multileveled association between IB environmental features, organization, manager's cognitive style and internationalization mode.*

**KEYWORDS:** *internationalization process, manager, environment, cognitive style, decision-making, dual-process theory*

**JEL CLASSIFICATION:** *F23*

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### **1. INTRODUCTION**

The influence of both environmental and organizational factors on the internationalization process has extensively been investigated during the last decades (Acedo and Casillas, 2005; Matysiak and Bausch, 2012). However, the manager's role has remained only marginally considered in the international business-IB arena to date (a notable exception is Maitland and Sammartino, 2015), while it has been largely incorporated in the general stream of management-behavioural strategy, in particular in recent decades (Gavetti, 2012). This is even more relevant for small and medium-sized enterprises (SMEs), since managers and owners are quite often the same group. Being more limited in size and in available resources than larger firms, hitting the right objective at the first shoot when going international is crucial for those enterprises. According to Eurostat data, the more than 21 million of SMEs in the European Union represented up to 99% of business, generated 3.6 trillion Euros in value added and employed 88.8 million people across the EU28 in 2013. Thus SMEs are a particular focus of interest.

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Scholars studying the internationalization decisions include a variety of influencing factors such as firm characteristics, size, age, human and financial resources, and environmental issues (Child and Hsieh, 2014). On the other hand, the extensive literature on strategic choice and manager's traits presents strong arguments that individuals matter and are at the heart of any strategic decision. Individuals embedded in the organization are the ones who make decisions. Strategic decisions are influenced by the manager's experiences and traits. However, the relation between manager, organization and environment is still a dark box that requires further investigation, especially in terms of how the manager's cognitive style affects the process of decision-making of international strategy (Nadkarni and Barr, 2008).

It has been acknowledged that internationalization performance determinants should be assessed at two main levels—the internal and the external levels to the organization (Zou and Cavusgil, 1996). However, from the lowest perspective, the manager is the third level. Research so far has frequently considered the two upper levels but there is a dearth of research on how the three of them interact. In particular, the case of how the manager's cognition filters the information that influences the decision making regarding internationalization process is still an underestimated area. Scholars have argued that no attempt has been made to examine the role of cognitive style on the process of decision-making (i.e. review of Akinci and Sadler-Smith (2012), and only a handful of investigations have studied it applied to the internationalization process (i.e. Acedo and Florin, 2006). These latter authors have highlighted that future research should consider the possibility that depending on the manager cognitive style –i.e. whether the manager is intuitive, adaptive or analytic- the organization's result can vary. In the case of the IB arena, this entails whether the manager's cognitive style has an impact on the process of internationalization and whether there is an optimal cognitive style. Or, conversely, whether there is a better style for a certain pattern of internationalization (e.g. gradual, slow internationalization vs. a rapid process of internationalization).

On the one side, the environmental deterministic approach suggests that managers can make rational decisions using analytical frameworks (e.g., Porter's five forces, Porter's generic strategies, Ansoff's model, BCG Matrix, etc.). Those frameworks explain environmental forces and possible strategies to deal with them. On the other side, human brain tries to simplify complex circumstances to make decisions, a process that take the form of heuristics (Simon, 1981) or models as the mentioned above. This is rooted in the dual-process theory: System-X and System-C are in charge of processing the information to reach a final decision (for a historical review on intuitive judgment in management see Akinci and Sadler-Smith, 2012). System-C acts essentially at a conscious and deliberate level, while System-X is reflexive and unconscious and it yields a decision without the individual being able to say why or how s/he reached that decision. The latter process entails an automatic retrieval of information in past experiences in addition to the effect of emotions at an unconscious level (e.g. depending on how the binomial of a similar context-decision makes him/her feel based on subsequent performance). Since the internationalization has been described as a process of gaining experiential-based knowledge, it seems that the former approach will help understand the three-stage process of decision-making: options, evaluation and choice (Fellows, 2004). Entrepreneurs such as John Chambers of Cisco Corporation, Charles Schwab, Richard Branson of Virgin-Atlantic, and Paul Orfalea of Kinko's described cognitive strategies such as thinking in pictures, employing analogies, as critical techniques they developed to overcome the complexity of the business environment and decision making under those circumstances (Haynie, Shepherd, Mosakowski, and Earley, 2010). It seems then that a certain individual may process complex external signals and try to simplify them to design a certain strategy in a different way as another would do, i.e. according to his/her cognitive style.

Depending on the work environment (context specificities), the cognitive style perceptions are differently developed, but the main clue is that manager will seek fit between their style and task/workplace requirements (D'Amato and Zijlstra, 2008). However, individuals within particular

occupational and workgroups are likely to have similar cognitive styles related to the information processing requirements of their job role (Hayes and Allinson, 1998). The question that arises is whether the fit between the manager's cognitive style and the style required by the firm's internationalization process yields improved levels of performance. Or to put it differently: which of cognitive style is best suited to an accelerated process of internationalization and which to a more gradual and slower process of internationalization?

Thus this study's aim is to reflect on this intertwined relationship between the manager's cognitive style, the organization's internal features and the environment when it comes to the process of internationalization. It is organised as follows: first the theoretical background is presented. A number of testable propositions and their discussion follow. Finally, conclusions are drawn, along with the implications for future research and practitioners.

## **2. LITERATURE BACKGROUND**

In order to examine the role of the manager in the organization, we have adopted the Upper Echelons perspective developed by Hambrick and Mason (1984), later reviewed by Carpenter and colleagues (2004): the manager represents the central factor in order to explain the firm's behaviour. However, the mechanism by which the organization mirrors the manager's behaviour is still a black box, in particular in the case of the international behaviour.

Firms cannot take a course of action as a response to raw information from the environment until that information is processed by the managers. Due to the increasing number of challenges that managers are facing (i.e. changes in government policies, industrial restructuring, national and international competition, innovation, quick changes in the demand, globalization etc.) managers are forced to continuously evaluate and re-evaluate their decision-making processes. This leads to changes in the existing dominant logic and adaptation of new or improved schemata. In this context of regular change, the development of cognitive skills for decision making arises as fruitful research avenue.

Effective strategic decisions are consisted of: comprehensiveness, quality, effectiveness, and speed. Decision comprehensiveness refers to process of making and integrating strategic decision (Fredrickson, 1984). Quality of strategic decisions is defined according to impact of the decision on the organizational performance or the quality of decisions relative to its intent (Amason, 1996). Effectiveness refers to strategic decision results in desired outcomes, which in case of internationalization is valued by firm performance. The speed of a strategic decision reflects the pace at which it is made and executed, which in case of internationalization represents one of the key factors: the pace of the degree of internationalization (Dean and Sharfman, 1996; Eisenhardt, 1989; 1999). Finally, literature suggests that speedier, high-quality and effective decisions through comprehensive processes are more desirable and likely to improve performance of the firm (Elbanna, 2006).

The process of decision making in internationalization is categorized as extremely complex and dependent on time and experience, and with high influence of environment, competitors, resources (Johanson and Vahlne, 1977; 2009). Managers are sometimes unable to make fine decisions under these conditions of risk and uncertainty, so there is a need to improve the process of decision making. What is known so far is that complex decisions require increased significance upon simplification, making the role of cognitive processes increasingly important (Einhorn and Hogarth, 1981). The hints to understand the process of simplification can be found in cognitive approach of decision making.

Empirical studies have increasingly drawn the attention to cognitive aspects as explanatory factors of the firm's decision making process. It has been found that a decision is reached in the complex interaction of two cognitive systems, namely System-1 (or sometimes called System-X) and System-2 (or System-C). In order to define immediate judgments that are mostly based on feelings, humans use System 1 (System-X) which is named as "intuitive", "experiential", or "impulsive" reasoning. System-2 (System-C) is known to be more "logical", "rational", or "reflective" (Epstein, 1994; Evans and Stanovich, 2013; Healey and Hodgkinson, 2014; Kahneman and Frederick, 2002; Strack and Deutsch, 2004). Therefore, strategic decisions are not the consequences of mechanistic rational procedures; they are rather outcomes of behavioural attributes that are not equally distributed among managers (Simon, 1981). Cognitive biases are deeply embedded in routines, automatic behaviour, psycho-physical distortions, and executives' knowledge structures. In practice, emotional, social, and political realities nearly always influence decision judgments in international business (Powell, 2011). The major strength of System X approaches to strategy-making in internationalization is that it enables managers to rapidly perceive a wider perspective from its surrounding detail, but at the same time those managers might overlook hidden data that might be seen by their competitors with highly developed analytical capabilities (Clarke and Mackness, 2001). Therefore, while making decisions based purely on cognitive biases there is a need to take extra precaution, related to the level of the manager cognitive ability, and in particular that derived from his/her expertise on IB. However rationality's limits have long been recognized (Simon, 1987), sometimes referred to as bounded rationality. One of the main downsides of rational analysis is the manager's inability to let go of a particular problem until s/he has as much data as possible (Sadler-Smith and Shefy, 2007)(Becker, Cropanzano, and Sanfey, 2011).

In their 40 year literature review on the role of cognition in business and management, Armstrong et al. (2012) found certain lack of studies that have adopted models reflecting more complex relationships between individual and environmental factors (i.e. moderation and mediation). Certain managerial characteristics such as those related to the international outlook of the decision maker as well as perceptions regarding environment influence, have generally been acknowledged as shedding light on the internationalization process of the firm. The relation between the environment and the perceived possibilities to go international is categorized as the positive relationship between the manager's perception and export performance of the firm (Stoian, Rialp, and Rialp, 2011).

Internationalization process has been described as the institutional and organizational arrangements that enable companies to enter a market with its products, technology, human skills, management, and other resources. To date, the dominant theoretical approaches have included a variety of reasons and mechanisms to explain the internationalization behaviour of firms.

The gradual commitment of resources in the international market based on knowledge-based experience is at the heart of the Uppsala model of internationalization (Johanson and Vahlne, 1977; 2009). It can be defined as a sequential, gradual, and step-by-step approach to internationalization. The case study of Haide and Mariotti (2016) showed that with passage of time, companies seemed to learn and develop their own repositories of knowledge. This led them to innovate and create knowledge internally that boosted their internationalization. Internalization of knowledge and productive means are crucial to understand why the multinational enterprises tend to expand its activity (Buckley and Casson, 2009). However, these theories seemed to be invalid to explain why certain ventures decided to commit resources with international markets at or shortly after inception. This required the intersection with entrepreneurship to find a valid explanation to the international new ventures phenomenon (Oviatt and McDougall, 1994; Oviatt, Shrader, and

McDougall, 2004) and other similar nomenclatures of early and accelerated internationalization (Zahra, Ireland, and Hitt, 2000): some firms are more entrepreneurial-oriented than others. This seems to be signalling the linkage between the manager's cognitive style and the organization as mirroring his/her style.

### 3. PROPOSALS

So far, researchers have defined cognitive style as an individual's preferred and habitual approach to organizing, representing, processing information and problem solving (Brigham, De Castro, and Shepherd, 2007). Depending on the environmental influences, the same individual can develop different individual cognitive styles to approach the decisions that are to be made. Such individual styles are predictors of the manager's success when making decisions (Kozhevnikov, 2007). Depending on the environment, each manager has a different set of information available. Features of environment determine when information will reach the manager and thus which opportunities can be identified and evaluated. Managers are affected by the environment in the same manner that it affects the firm even though it is easier to change a firm it is more difficult to change the environment.

According to Kahneman and Klein (2009), judgments and decisions that System X produces are skilled, appropriate, and eventually successful. But not all intuitive judgments are skilled, although our hunches about the frequency of exceptions differ. The determination of whether intuitive judgments can be trusted requires an examination of the environment in which the judgment is made and of the opportunity that the judge has had to learn the regularities of that environment. Task environments are described as "high-validity" if there are stable relationships between objectively identifiable cues and subsequent events or between cues and the outcomes of possible actions. Validity and uncertainty are not incompatible. Some international environments especially are both highly valid and substantially uncertain. High validity environment does not imply the absence of uncertainty. The high uncertainty condition had a greater intuitive-inducing effect at the end, because it is difficult to control something when there is a lack of clues and evidence (Mahan, 1994). An environment of high validity is a necessary condition for the development of skilled intuitions. Other necessary conditions include adequate opportunities for learning the environment (prolonged practice and feedback that is both rapid and unequivocal). If an environment provides valid cues and good feedback, skill and expert intuition will eventually develop. Executives who possess greater overall cognitive ability to shift between two systems of decision making can probably more quickly perform internationalization decisions. The manager therefore is the central unit of analysis to understand the internationalization decisions made by organizations.

P1: *Psychological factors from the manager's environment influence the manager's cognitive style.* Environment has a direct effect on the manager's cognitive style and the development of both Systems X and C, it is important to notice that manager's role represent a key figure in processing and presenting information to the company in order to create knowledge useful for IB activities. The firm will receive information selected and processed by the manager, who will incorporate his/her own experiential knowledge. Agor (1984) introduced three broad types of management styles based on the manager's cognitive tendency: the intuitive, the analytical, and the integrated. He defined that managers with the analytical style like to separate problems and break them into more manageable parts with their analytical and cognitive skill. On the contrary, intuitive managers will rely more on feelings to make decisions, prefer unstructured situations, and solve problems

holistically. Finally, managers with a tendency to integrated style use both analytical and intuitive decision making processes depending on the requirements of the situation. More importantly was the fact that one's style of decision making includes stable individual characteristics; it applies to interpersonal relationships, and spreads throughout the whole organizations.

Therefore, managers who are intuitive will be able to perceive broader pictures from the environment; meanwhile they may overlook some crucial information hidden in details. At the same time, the integrated or adaptive style could be categorized as optimal since this manager is able to shift from one style to another depending upon context and task particularities. In SMEs, the role of gathering and analysing information is usually done by the same single person, the manager. S/he filters the external information and decides which information is business-relevant. We suggest our next proposition as follows:

*P2: The cognitive style of the manager purely mediates the relationship between external information from the international business environment and the firm's international performance.*

The environment has been noted as crucial factor in defining firms' specific advantages and motives for internationalization. Yet the extent to which a firm is motivated to internationalize is mostly dependent on the decision maker's perceptions about the internationalization markets (Leonidou et al., 2007). And environment and industry play a role on the creation of managerial cognition, which is essentially experience-based. To raise the importance of cognitive style of a manager to the internationalization process we can recall the empirical study conducted by Kalinic and Forza (2012), who found that the choice of the host country never followed a systematic approach; the choice was led by the managers' personal connections or intuitions and their opinion about the potential advantage of a favourable situation. Their research has also extensively analysed the mechanisms that explain the pace of SMEs internationalization. Nevertheless, neither the mechanisms identified for the gradualist models explain this behaviour nor those for INV fully capture the traditional SMEs that rapidly internationalize operations in new and unknown markets despite limited market knowledge, limited use of international networks, and limited entrepreneur's international experience.

According to Patton (2003) there are three sources of intuition: innate response, general experience and focused learning. Since innate response is component that could not be changed the other two components can be sharpened and enhanced in order to improve international business decisions. To make general experience more effective requires heightened sensitivity to the situations, events and decisions that are encountered. The manager cognitive style influence the understanding of the information selected from the environment. Therefore, managers can and should manage their experiences in order to educate their cognitive style (experience-based knowledge). Most of the intuitive judgments and decisions stemming from System-X are appropriate and eventually successful. But not all intuitive judgments are skilled, although our hunches about the frequency of exceptions differ. The determination of whether intuitive judgments can be trusted requires an examination of the environment in which the judgment is made and of the opportunity that the judge has had to learn the regularities of that environment. An environment of high validity is a necessary condition for the development of skilled intuitions. Other necessary conditions include adequate opportunities for learning the environment (prolonged practice and feedback that is both rapid and unequivocal). If an environment provides valid cues and good feedback, skill and expert intuition will eventually develop (Kahneman and Frederick, 2002; Kahneman and Klein, 2009).

Executives who are up to real-time information are better at developing effective intuitive talents. These managers aided by well-developed and highly skilled intuition can react quickly and accurately to changing stimuli in their firm or its environment. (Andersen, 2000).

Managers who possess greater overall cognitive ability to shift between two systems of decision making can probably more quickly perform internationalization decisions. Decision making in SMEs means an individual making a discrete choice, but involves complex judgments that have consequences beyond the manager and the organization. The whole decision environment of the firm has psychological influence on the characteristic of strategic decisions (Powell, 2011).

Individuals can develop a unique higher-order cognitive capability to monitor and control their information processing to adjust their behaviours' under different circumstances. This capability is known as metacognition and represents a rapidly growing domain in the decision making literature. (Haynie, Shepherd, Mosakowski, and Earley, 2010). According to (Allinson and Hayes, 1993) there are two types of managers: intuitivist and analyst. Intuitivists are managers who prefer an open-ended approach to problem solving, rely on random methods of exploration, remember spatial images most easily, and work best with ideas requiring overall assessment. Analysts are managers who tend to be more compliant, favour a structured approach to problem solving, depend on systematic methods of investigation, recall verbal material most readily and are especially comfortable with ideas requiring step by step analysis. Analysis refers to judgement based on mental reasoning and a focus on detail. Intuition refers to immediate judgement based on feelings and it is related with the adoption of a global perspective. According to research conducted by Khatri and Ng, (2000) intuition in strategic decision making across different industry types [a proxy for environmental stability from utilities (low instability), through banking, to computer firms (high instability)] found that intuitive managers outperform in high instability industry whereas analytical managers showed a positive association with the financial performance of banks and utilities and a positive association with the financial performance of computer companies.

By initiating operations in a foreign market, an internationalizing manager develops experience of operating in that market. This experience is based on a manager's interactions within foreign business relationships, such as relationships with foreign customers, suppliers, and competitors (Blomstermo, Eriksson, Lindstrand, and Sharma, 2004). Crucial factor for development of manager cognitive style represents the industry in which s (he) is working. The industry characteristics shape the competitive strategy of a firm and are an integral part of the international environment for the manager. The industry in which a firm operates affects as well at the level of innovation, uncertainty, time pressure, all of which are relevant to a firm's foreign market entry mode choice. The literature has revealed that SME foreign market entry mode choice depends on the firm's industry (Laufs and Schwens, 2014). Therefore, as internationalization process that follows INV is defined as more rapid and complex we propose following.

*P3: The fit between the manager's cognitive style and the process of internationalization followed by the SME will affect the performance of that process.*

We disaggregated this into two propositions:

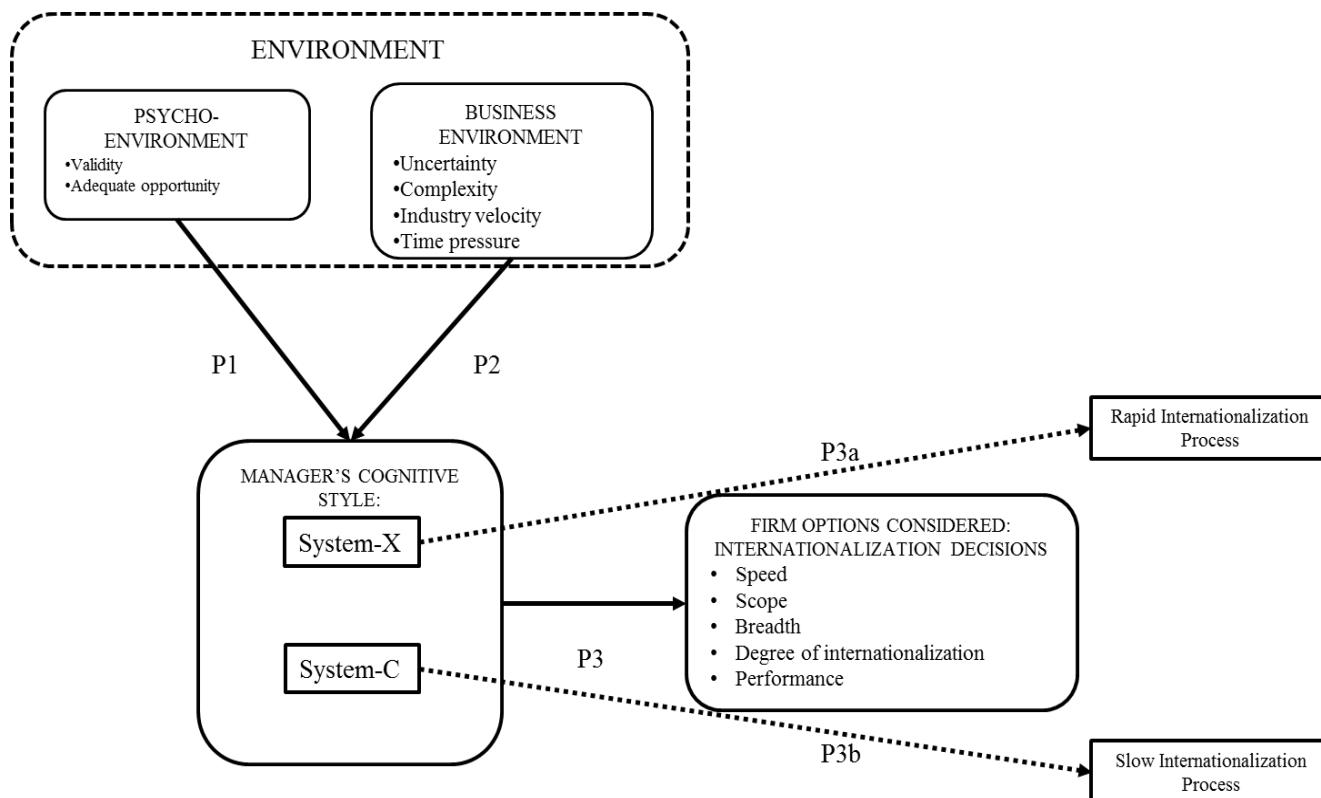
*P3a: Managers with a tendency to use the System-X will outperform those using System-C in the case of a rapid process of internationalization*

*P3b: Managers with a tendency to use the System-C will outperform those using the System-X in slower gradual, more sequential process of internationalization*

The firm is affected by subjective representation of environment from manager. In other words, the subjective representations that top managers develop about their environments help define the

firm's strategic agenda (Dutton and Jackson, 1987). The manager's opportunity recognition affects the way companies make decisions (Shepherd, McMullen, and Ocasio, 2016). Nadkarni and Barr (2008) defined that subjective cognitive representations of the manager are classified as:

1. Attention focus refers to the degree to which top managers' subjective representations of their external environment are dominated by concepts related to one (or more) domain over others
2. Environment-strategy causal logics are top managers' beliefs regarding the causal relationship between environment and strategy.



**Figure 1: Influence of the environment on the internationalization decision making process through the manager cognitive perspective.**

Source: Authors

#### 4. DISCUSSION

Managers can acknowledge their strengths, recognize their weaknesses, and understand the strengths and weaknesses of others, by knowing their own cognitive styles, and those of others. More than that, they can use this knowledge to improve their effectiveness by either overcoming their weaknesses or compensating for them.

A decision maker, who is aware of cognitive system importance and its impact on the choice of alternatives, is likely to strike an effective balance between consideration of analysed data and alternatives, and the intuitive component. According to Patton (2003) there are three sources of intuition: innate response, general experience and focused learning. Since innate response is component that could not be changed the other two components can be sharpened and enhanced in order to improve international business decisions. In order to develop skilled intuition manager must fulfil two conditions: the manager environment must provide adequately valid cues to the



nature of the situation and managers must have an opportunity to learn the relevant cues (Kahneman and Klein, 2009). To make general experience more effective requires heightened sensitivity to the situations, events and decisions that are encountered. Therefore, managers can and should manage their experiences in order to educate their intuition (Hogarth, 2003; 2010). Which implies that adequate environment plays a crucial role in manager cognitive style development. Many authors defined that expertise is an antecedent to trustworthy intuition and hence we are only interested in intuition in those with a high level of expertise (Dane and Pratt, 2009); (Sadler-Smith and Shefy, 2004).

Moreover, the strategy literature has identified two sectors of environment to which firms attend — task and general (Garg, Walters, and Priem, 2003). Even though that both of these factors are important focus of our research is toward task sector (The task sector includes those aspects of the environment that have direct transactions with the firm such as competitors, suppliers, and customers, while the general sector includes more macro-level dimensions such as social, demographic, economic, and political.)

Since it is proven that environment represent a crucial factor in cognitive style development, the question that we tried to answer is can certain cognitive style outperform in internationalization decision making process. As decision making is a key role of managers. Among various decisions that managers make (i.e. administrative, operational, tactical, financial, etc.), decisions with strategic consequences known as internationalization decisions are more important because they are associated with higher levels of risk and uncertainty and directly affect the performance of the firm. Therefore, if looking from proposed model the company that is working in high velocity industry and is affected by high validity environment, with adequate opportunity to develop cognitive style more intuitive or adaptive information processing is most likely to outperform. In this case firms should follow rapid process of internationalization such as INV or Born Global. On contrary, if firm is based in low velocity industry that is characterized by low validity environment but with adequate opportunity for managers to develop cognitive style (i.e. more analytical – System C), than companies should follow more gradual, sequential process of internationalization such as Uppsala model.

## 5. CONCLUSIONS

This conceptual paper has tried to dig deeper in the behavioural micro-foundations of the process of decision-making in international strategy. We have provided arguments in favour of the importance of fit between the manager's cognitive style and the mode of internationalization. Essentially, we expect that those firms that are required to or that wish to follow a rapid process of internationalization should hire managers with a higher tendency to adopt the system-X in his/her process of decision-making. This is essentially due to the fact that this style outperforms the system-C in situations where the level of complexity is high and there is a higher pressure on speed. Furthermore, manager`s with developed system-X cognitive perspective are more appropriate to filter information from high velocity industries such as information technology where the INV are most common. Meanwhile, those managers with higher natural tendency to adopt system-C style are more likely to perform well in low velocity industries. These firms follow a more slow gradual and sequential process, mainly because those firms tend to emphasize caution instead of speed or quick results.

Future research therefore should investigate whether certain cognitive style is more suitable for certain type of firms and industries. In addition, research avenues towards the promising land of organizational neuroscience should be opened, i.e. how we can investigate further the issues around knowledge from the individual unit of analysis in the socio-technic context of the firm. Future developments should investigate how we can train managers to shift from one cognitive style to another in their decision making processes depending upon contextual factors. In particular, we

have provided some suggestions for those managers and firms willing to go international according to internationalization mode that the firm is planning to follow. All in all, research on behavioural strategy and cognitive social science should be included in the research agenda of international business.

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