

**THE POWER AND PERILS OF COGNITION: DIFFERENTIAL ROLE OF  
HEURISTICS AND BIASES IN THE INITIAL AND POST-ENTRY  
INTERNATIONALIZATION**

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# **THE POWER AND PERILS OF COGNITION: DIFFERENTIAL ROLE OF HEURISTICS AND BIASES IN THE INITIAL AND POST-ENTRY INTERNATIONALIZATION**

**Abstract.** Given the fact that we know only little about how owner-managers actually make internationalization decisions, we must consider the biases and dispositions of SMEs' most powerful actors - their top executives especially to know how the biases and heuristics change from the initial internationalization stage to the later stages. The early internationalization perspective in IE has largely focused on the initial export activities of firms and has subsequently overlooked to address what happens to these firms after this initial phase from the perspective of cognitive heuristics and biases. In response to this, in this article we present a framework for the influence of individual heuristics and biases in initial and later stages of internationalization. We include one key variable in early internationalization, i.e. owner-managers' prior international experience and how different biases originate from this source and impact initial internationalization. Later on, we show that experiential learning during and after initial internationalization gives rise to some specific heuristics and biases that impact subsequent internationalization. We also find that the power of heuristics and biases in initial stage may turn into perils in the subsequent internationalization.

## INTRODUCTION

International Entrepreneurship (IE) literature is dominated by the research on the born globals (BGs) or early internationalizing firms (EIF) characterized as small firms that internationalize rapidly and simultaneously, at or near their establishment, into the world's leading markets (e.g. the USA, Europe and Japan) regardless of psychic distance. This approach runs contrary to that of the traditional incremental model (e.g. the Uppsala model), which views firm internationalization as a gradual and sequential process beginning with psychically close countries and transitioning to more distant nations as firm resource commitment levels increase (Johanson & Vahlne, 1977). This EIF perspective, however, has largely focused on the initial export activities of firms and has subsequently overlooked to address what happens to these firms after this initial phase (Gabrielsson *et al.*, 2008) with some recent exceptions (e.g. Bunz *et al.*, 2017; Khan & Lew, 2018; Prashantham & Young, 2011). To address this gap, an increasing number of studies have emphasized calls for relevant research (Johanson & Martín, 2015; Kuivalainen *et al.*, 2012). The absence of such analysis is critical, since even two decades after Oviatt & McDougall (1994) conducted their seminal work, we still lack theoretical understanding of how EIFs grow after initial entry (Jin *et al.*, 2018) and how decisions underpinning such growth are made. In response, in this paper, we address how EIFs take internationalization decisions in their subsequent market entries in the same market or different ones, in addition to the decision-making in the initial entry. Furthermore, key strategic decisions in SME internationalization including international market selection and entry mode choice (Ellis & Pecotich, 2001) have been investigated through the lens of large MNE internationalization theories (e.g. The Uppsala-model, the Eclectic Paradigm, Transaction Cost Economics, and Institutional Theory) (Laufs & Schwens, 2014), ignoring the role of the key decision makers in internationalization (Kogut *et al.*, 2002; Laufs &

Schwens, 2014; Papadopoulos & Martín, 2011). In SMEs, the decision maker's characteristics and mental models drive organizational strategy including internationalization decisions (Maitland & Sammartino, 2015). To delve into these individual mindsets and mental models, cognitive approach including heuristics and biases seems to be very promising because they can explain why decision makers adopt risky endeavors (Busenitz & Barney, 1997; Townsend et al., 2010) or avoid them. Given the fact that we know only little about how owner-managers actually make internationalization decisions (Benito et al., 2009), we “must consider the biases and dispositions of their [the SMEs'] most powerful actors – their top executives” (Hambrick, 2007, p. 334) to understand the internationalization decisions of these firms (Laufs & Schwens, 2014). There is a lack of research interest involving the heuristics and biases of owner-managers in international entrepreneurship (IE) literature. Managerial cognition's role in assessing foreign environments and determining internationalization decisions remains underexplored and poorly understood (Aharoni et al., 2011; Benito et al., 2009; Hennart & Slangen, 2015). Additionally, researchers' use of rationality assumptions in internationalization models are no longer coherent (Aharoni et al., 2011) because findings from bounded rationality and cognitive limitations perspective suggest that models relying on choices made by rational decision makers are extinct. Therefore, a cognitive approach can be useful in understanding internationalization decision making (Papadopoulos & Martín, 2011). A cognitive approach can eliminate some of the prevailing but unrealistic assumptions about the way manager-entrepreneurs make their IE decisions, allowing us to consider the rational and non-rational elements in their decision-making (Maitland & Sammartino, 2015; Zahra et al., 2005).

In this article we present a framework for the influence of individual cognitive heuristics and biases in the initial and later stages of internationalization. We build on the theory of cognitive

heuristics and biases, which could be described as cognitive tools of human intuition (Kahneman et al., 1982). Heuristics may act as mental shortcuts to make decisions in a shorter period of time and at the same time they may induce entrepreneurs to some types of biases (Cossette, 2015). Research on behavioral decision-making indicate that individuals neither comprehensively search for, nor accurately interpret, information because their cognitive capacity is limited (Buckley et al., 2007; Cooper et al., 1995; March & Simon, 1958). To cope with these limitations, they employ cognitive heuristics and simplifying strategies, which may lead to a number of cognitive biases (Schwenk, 1988). Firm leaders may be particularly prone to such biases (Arend et al. 2016; Busenitz & Barney, 1997) because they unintentionally simplify their information processing to diminish the stress and ambiguity associated with the decision to start ventures (Duhaime & Schwenk, 1985; Hansen & Allen, 1992) or internationalize them (Autio, 2017; Ricard et al., 2016). The use of such decision heuristics and the emergence of such biases is more prevalent in the internationalization of EIFs because of the speed of decision making (Shepherd et al., 2015) and the rapidness and pace of entries by these firms. Owner-managers of these firms use heuristics more frequently to increase the speed of the decision making and the effectiveness of addressing emerging challenges and opportunities in international markets (Busenitz & Barney, 1997).

When firms decide to enter foreign markets they have to adjust and be prepared for challenges such as differences in language, lifestyles, cultural standards, consumer preferences and purchasing power (Albaum & Tse, 2001; Lu & Beamish, 2001; Peñaloza & Gilly, 1999; Pornpitakpan, 1999). The *psychic distance* concept has been used in the IB literature to assess these differences between markets (Evans & Mavondo, 2002; Grosse & Trevino, 1996; O'Grady & Lane, 1996) and has been used as a key variable to explain foreign market expansion and international trade, especially in the Uppsala internationalization theory (Johanson & Vahlne,

1990; Fletcher & Bohn, 1998). Expansion into new markets is assumed to start in psychically close countries because these close markets reduce the level of uncertainty (Johanson & Wiedersheim-Paul, 1975; Fletcher & Bohn, 1998) and are easier for firms to learn about (Nordström & Vahlne, 1994). Contrary to the IB literature, IE suggests and reported that psychic distance has lost its relevance in the early internationalization of firms. Researchers reported firms in IT sectors ventured into highly psychic distant countries such as from Finland to Japan at a very early stage of their internationalization process (Ojala, 2008). However, scholars have recently rejuvenated the role of psychic distance in the early internationalization of firms (Sinha et al., 2015). Earlier IE research underscored the importance of psychic distance because most research, as we already mentioned, focused on the early stage of EIF internationalization. Sinha et al. (2015) found that while entrepreneurs in their early stage of internationalization perceive low level of psychic distance, during and after internationalization stage they realize that their earlier perception was wrong and now they recognize more psychic distance between countries. However, our knowledge on why this happens is yet limited. In this article, we explain this paradox, by building on the theory of cognitive bias and attributing to two stages of internationalization: pre-entry **psychic proximity bias** and post-entry **psychic distance bias**. We attributed the origins of these two biases to two different stages of experience of owner-managers. We posit that prior international experience of managers gives rise to psychic proximity bias as a result of their overconfidence. However, in the subsequent internationalization, they are influenced by psychic distance bias due to their experience and realization during and after initial internationalization phase. We consider ‘psychic proximity bias’ as a motivational bias which is a tendency to provide optimistic forecasts for a preferred action or outcome and which is not always necessarily conscious (Montibeller & Winterfeldt, 2015.). We define psychic proximity bias as ‘the tendency to perceive less psychic

distance between two countries than they may be in reality, due to a person's prior exposure to these countries or similarly perceived ones, which essentially motivate her to internationalize the venture early. Next, we define 'psychic distance bias' as a managerial behavior pattern in which a manager facing increasingly negative outcomes from an earlier decision based on distorted belief in psychic proximity reverses her belief towards a higher level of perceived distance between countries, due to the reality shock encountered at the initial stage of internationalization.

In this paper, first, we aim to contribute to the cognitive perspective in the IE literature. Both IB and IE literature recognize prior experience as an important factor in internationalization. While Uppsala internationalization theory (Johanson & Vahlne, 1977) emphasizes firm level experience as a critical factor in internationalization, IE emphasizes the individual/entrepreneur level of experience. However, both literatures have only recently started to incorporate the cognitive perspective (e.g. Maitand & Sammartino, 2015) and there is limited understanding of the role of prior experience from a cognitive viewpoint (Jones & Casulli, 2014). We posit that prior experience is applied to internationalization through its influence on heuristics and biases in decision makers, which in turn influence internationalization decision. Therefore, a cognitive perspective can counter some of the prevailing but unrealistic assumptions about the way entrepreneurs make their IE decisions, allowing us to consider the rational and non-rational elements in their decision-making (Zahra et al., 2005).

Heuristics and biases adopted in entrepreneurial decision making vary according to context. For example, the heuristics used at the business opportunity assessment stage are not the same as those used at the opportunity exploitation stage (Bryant, 2007). Therefore, scholars suggest new research is needed on the subject of heuristics and biases at different stages in the

entrepreneurial process and it is imperial to determine which heuristics and biases are used most frequently in which contexts and why (Cossette, 2015). By replicating the most pressing questions in entrepreneurship raised by Baron (2004), we also need to search for the answers to the similar questions in IE: Why do some people decide to become international entrepreneurs, why are some more skilled than others in recognizing international opportunities, and why are some more successful than others? To provide convincing answers to these questions, we need to resort to the theory of heuristics and biases (Cossette, 2015). IE being an entrepreneurial process, also, needs to be understood at its different stages, such as initial and post-entry internationalization stages. Although it is well known that owner-managers use mental shortcuts in their decision making, research is lacking in detailing the types of heuristics used, how these are formed and triggered, and the benefits generated in internationalization activities (Shepherd et al., 2015). Recent research suggests that the capabilities needed for the survival of EIFs may be at odds with the original aims that had brought them into the international markets (Khan & Lew, 2018). Therefore, in connection to our earlier discussion, we investigate how owner-managers' different heuristics and biases influence the internationalization decisions, both in the initial and the later stages of internationalization.

Second, we contribute to the ongoing debate in IB and IE on the psychic distance paradox by providing an explanation from the cognitive bias perspective. The antecedents to psychic distance are theorized and empirically investigated as country level factors such as geographic and cultural distance as well as the level of economic development between two countries (Håkanson & Ambos, 2010), hence the individual level determinants, from a managerial point of view, which is prior international experience, is missing from the literature (Petersen & Pedersen, 1997). Therefore, we include individual owner-manager prior international experience before initial entry

and experience after post-entry, linked to several heuristics and biases, to attend to the psychic distance paradox.

Third, we contribute to the IB literature, especially in the market selection literature, by providing the specific reasons why manager-entrepreneurs stick to their previously taken decisions in market selection. In the first stage of the model, we discuss how several heuristics and biases originate from the decision makers' prior international experience lead to internationalization decision. More specifically, why manager-entrepreneurs who have previous experience in operating in developed countries only stick to these countries in subsequent internationalization has been analyzed from a cognitive bias perspective. Further, we contribute to the entry mode literature in IB, by providing the specific reasons why manager-entrepreneurs stick to their previously taken entry modes in new market entries from a cognitive bias perspective. Finally, we also contribute by providing two different sets of heuristics and biases active in the two stages of internationalization. We don't focus on the performance outcomes of internationalizing firms, rather internationalization decisions at two different stages: initial entry and post-entry. Recent research suggests that the capabilities needed for the survival of EIFs may be at odds with the original aims that had brought them into the international markets (Khan & Lew, 2018).

In the next sections of this paper we first provide an overview of related heuristics and biases studied in the entrepreneurship literature, followed by the application of such biases in internationalization decision making. Then we derive to some testable propositions and conclude by discussion and implications of the study.

## **HEURISTICS AND BIASES: AN OVERVIEW**

International market entry can be considered an entrepreneurial act involving individual decision making (Andersson, 2000; Schweizer et al., 2010). Thus, given that heuristics and biases have received only limited attention in the IB literature, we draw on the entrepreneurship literature to see what aspects of heuristics and biases are studied in this field.

For the purpose of this paper, we define bias as the systematic deviation from rational choice theory when people choose actions and estimate probabilities (Baron, 2007; Tversky & Kahneman, 1974). Theories on heuristics and biases have had enormous influence in fields such as behavioral economics (Kahneman, 2003), medical science (Bornstein & Emler, 2001), auditing (Solomon & Trotman, 2003) and public policy (Rachlinski, 2004).

Research on biases in entrepreneurship has increased rapidly since its inception and has become an important and widespread area for entrepreneurship (Krueger, 2005; Zhang & Cueto, 2017). In a review of studies on biases in entrepreneurship, Zhang & Cueto (2017) identified eleven biases studied in the entrepreneurship literature. In terms of the relationships found in these studies in entrepreneurship, they introduced a typology of biases (Baron, 2007): *(a) make-happy*: biases that result from the effects of goals or desires or beliefs and invoke not just cognition but also emotion: e.g. overconfidence, overoptimism, and self-attribution; *(b) sketchy-attribute*: biases that describes the behaviors of attending to one attribute when other attributes are more relevant, as a result of recent or memorable events, it is a good indicator for another attribute in another context, or it is mistaken as a salient or useful indicator due to humans' limited capacity for information processing (Bless et al., 2004): e.g. availability, representativeness, the illusion of control, similarity, local bias, the law of small numbers, status quo, and hindsight bias); and *(c) psycho-physics* (the distortion in our perception of quantitative attributes as our sensitivity usually diminishes as intensity increases: e.g. overweighting low probabilities (Kahneman & Tversky,

1984) and framing effects for gains/losses (Levin et al., 2002). Research in entrepreneurship identified the antecedents to the first type of bias as experience, self-efficacy, ease of the task, strategic and organizational factors such as strategic fit, and context characteristics such as environmental dynamism, riskiness of the context, unfamiliarity and external investment with the consequences of these biases as risk taking, formation of new venture team, and performance measures. On the other hand, the second type of biases has antecedents as social capital such as network ties and relational capital, type of customer, search activity and sources, advisory opportunities, disinvestments and characteristics of VC, linked to consequences as of risk taking, new venture evaluation, introducing pioneering products and performance.

## **HEURISTICS AND BIASES IN INITIAL AND SUBSEQUENT INTERNATIONALIZATION**

This paper focuses on early internationalizing firms (EIFs), i.e. firms which become international early after inception (Madsen & Servais, 1997; Oviatt and McDougall (1994) or at inception (i.e. Born Globals). The aim of this paper is to propose a conceptual model of how heuristics and biases in key decision makers change during the early internationalization process of firms. Our logic is that, as leaders of newly internationalizing firms go through a number of novel, emotionally salient experiences in markets potentially quite unfamiliar to them, their thinking is likely to change (Jones & Casulli, 2014). Consequently, the logic they apply to initial entries may be rather different from that they apply in subsequent entries.

The importance of entrepreneurs has been dealt with in many studies, and the findings reveal a positive relationship between entrepreneurs' international attitude, orientation, experience, network, and positive international development (Ibeh & Young, 2001; Kuemmerle,

2002; Westhead et al., 2001). Some studies focus on the personal characteristics of the entrepreneur in international SMEs and on the reasons why entrepreneurs develop such characteristics (Morris & Lewis, 1995). They make reference to the personal life experiences like foreign education or work experience, travel, foreign birth, knowledge of foreign languages, and so on (Ditch et al., 1984; Simmonds & Smith, 1968). The empirical evidence is that entrepreneurs who have lived abroad are likely to export much more than the others who have not. Previous work experiences, a high level of education, and knowledge of foreign languages are characteristics related to a strong international orientation in terms of export intensity (Aaby & Slater, 1989; Athanassiou & Nigh, 2000; Cavusgil, 1984; Ibeh, 2003). Reuber & Fischer (1999) showed that internationally experienced top-managers move a small firm toward internationalization more quickly than their counterpart firms which cannot use this competitive advantage.

Owner-managers' previous international experience influences the outcomes of internationalization because it partially substitutes for the lack of organizational experience with internationalization. Huber (1991) suggests that even new firms do not start with a clean slate; they inherit the skills and experiences of their key founders. In new firms the conspicuous lack of organizational experience is therefore likely to exacerbate the cost of internationalization. The importation of routines from the managerial team's previous employment experience with international markets serves as the embryonic routines to enter new markets, consequently reducing the time and costs of capability development (Sapienza et al., 2006).

Therefore, in the IE literature prior experience of entrepreneurs has received much research attention and most researchers have showed its link to early internationalization. Individual experiences are mediated through a personal mental construct which acts as an interpretative

framework and then a range of conceivable methodologies are used in the evaluation process (Harper and Earl, 1996; Loasby, 1983).

Our conceptual development is organized around two stages of internationalization: initial and post-entry decisions. The conceptual framework of this study is depicted in Figure 1.

The relationships between experiences and biases are inconclusive and thus offer an interesting avenue for further research at individual level (Zhang & Cueto, 2017). The model indicates that prior international experience gives rise to certain biases within owner-managers, which lead them to early internationalization of their firms. Specifically, *overconfidence*, *optimism* and *psychic proximity biases* are posited to be at work during this stage. Because of prior international experience, owner-managers become overconfident to internationalize their ventures early, perceive low psychic distance between home and host countries and holds an optimistic view about the future outcome of early internationalization. After initial internationalization, managers learn from the outcome of their prior decisions, imitate prior decisions to minimize search cost and risks (especially in entry mode choice) and perceive a greater level of psychic distance as a result of their reality shock from a utopian view of early internationalization. These give rise to three specific heuristics and biases, namely, *availability heuristic (immediate past decisions)*, *status quo bias (stick to prior choice)*, and *psychic distance bias*, which mostly determine the subsequent internationalization decisions in the same or other markets. These heuristics and biases are useful in conditions of uncertainty what owner-managers face in terms of market demand and the firm's abilities to commit to the venture in high-risk-high-return international opportunities (Arenius & Minniti, 2005; Busenitz & Barney, 1997).

Figure 1: Conceptual Framework

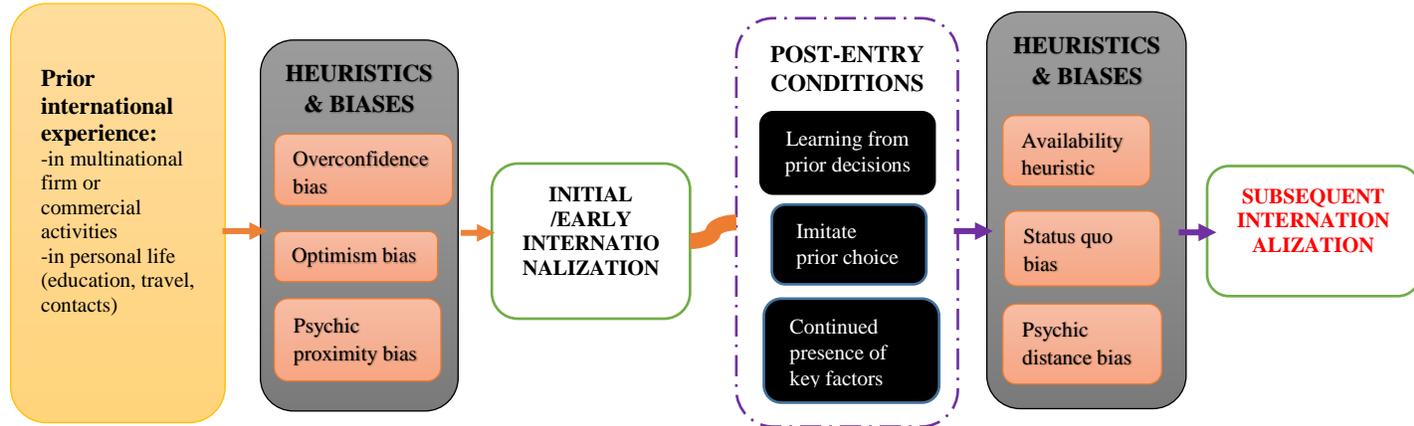


Figure 1: Initial and subsequent internationalization: role of cognitive heuristics and biases

### **Initial/early internationalization stage: prior international experience and cognitive heuristics and biases**

**Overconfidence bias.** Overconfidence bias is a tendency of decision-makers to be overly optimistic in their initial assessment of a situation, and then become slow to incorporate additional information about a situation into their assessment (Busenitz & Barney, 1997). Research reports that entrepreneurs perceive themselves as less risk averse than managers and employees (Koudstaal et al., 2015) and in economic decisions, entrepreneurs are more willing to accept strategic uncertainty related to multilateral competition and trust (Holm et al., 2013). The use of cognitive heuristics and biases enables fast decision making and reduces risk perception in uncertain situations, which in turn would explain the risky ideas entrepreneurs pursue (Busenitz & Barney, 1997; Keh et al., 2002; Simon et al., 2000). For example, the presence of *overconfidence bias* produces biased perceptions which may affect sense-making (Robinson & Marino, 2015), thus helping to explain entrepreneurial activities such as the decisions to create a new venture despite the high failure rates associated with this type of arguably risky behavior (Cooper et al.,

1988; Sarasvathy & Venkataraman, 2011). It is probably natural to experience feelings of entrepreneurial euphoria when first becoming a business owner (Cooper et al., 1988).

Overconfidence incorporates three separate and potentially independent psychological processes: (1) overconfidence in knowledge, (2) overconfidence in prediction, and (3) overconfidence in personal abilities (Hayward et al., 2006). In general, greater experience at performing a task leads actors to become more confident about their judgment on such a task (Pincus, 1991). Essentially, international experience in an international firm or in commercial activities or even in personal life from education/internship, travelling and personal contacts (Zucchella et al., 2007) endow a person with the knowledge and capabilities to deal with the demanding nature of international business and hence the person develops a sense of overconfidence in performing these tasks. Overconfidence has been shown in other management and finance domains to be associated with greater riskiness of product introductions (Simon & Houghton, 2003), greater persistence in developmental efforts of technologies (Lowe & Ziedonis, 2006), and greater cash-flow sensitivity of corporate investment (Malmendier & Tate, 2005). Cassar & Friedman (2007) found that overconfidence influences the decision to begin operating the venture, the time and financial capital invested, and the riskiness of the investment. In a similar vein, we argue that overconfidence resulted from the manager-entrepreneur's prior international experience reduces their risk perception and they venture into international arena at the inception of their firms. Mehrabi & Kolabi (2012) found that entrepreneurs with a higher level of education and those with more experience seem more likely than others to exhibit overconfidence bias.

Entrepreneurs typically must leave one organization in order to found another (Carroll & Mosakowski, 1987). While job satisfaction and salary might have influence on person's leaving the job to venture into business (Dobrev & Barnett, 2005), this is beyond the scope of our focus in

this study. In any job, people develop two types of capital: embedded and embodied capital (Terjesen, 2005). Human and social capital which is accumulated during work experiences but anchored to and possessing little value outside the arena in which it was originally developed can be termed “embodied career capital”. Embodied career capital is valuable to individuals in firms as it may help them to move up in the firm, get assigned better work projects, acquire more training and access other opportunities. Human and social capital which is mobile and value-generating outside the arena in which it was originally developed can be described as “embedded career capital”. The individual can control the use and application of these fungible resources. Embedded career capital may be particularly useful to individuals leaving organizations as it increases their marketability and alternative employment opportunities (Terjesen, 2005). Individuals with greater embedded capital accumulated from their international experience will become more overconfidence because they think that the capital they developed in their earlier career will help them venturing into international business.

**Optimism bias.** (Over)optimism bias is the tendency to overestimate the likelihood of positive events and underestimate the likelihood of negative events (Sharot, 2011). Experienced persons have a greater propensity to overweight the utility of their private information relative to the value of public information (Bernardo & Welch, 2001). That propensity also causes actors to ignore or underestimate the impact of the (1) failure rate of competitors who have sought similar opportunities in the past, (2) strength of competitors for focal opportunities, and (3) base failure rate among all founders (Bar-Hillel, 1983; Kahneman & Lovallo, 1993). Because more optimistic owner-managers believe that their private information and skills can overcome the base rates of failing at uncertain tasks, they tend to enter more exploratory ventures, such as those that involve riskier product development and carry a higher risk of failure (Bernardo & Welch, 2001). This is

what motives entrepreneurs to venture into distant, even geographically and psychically distant markets because their previous international experience make them optimistic about their venture's future success and underestimate the impact of the failure rate. Overoptimism encourages these entrepreneurs to approach challenges with enthusiasm and persistence (Carver & Scheier, 2003). Experienced entrepreneurs tend to have more opportunities available to them via their more extensive entrepreneurial networks and also possess richer cognitive frameworks for processing such opportunities than do novices (Ozgen & Baron, 2007). Cooper and his colleagues (1988) found that 95% of entrepreneurs believe that their ventures will most probably succeed even though over half of all new ventures fail. Similarly, Palich & Bagby (1995) found that entrepreneurs were more likely than managers to perceive strengths and opportunities and less likely to perceive weaknesses and threats.

**Psychic proximity bias.** Among the different constructs that have been studied in the international marketing literature, considerable attention has been given to decision makers' *psychic distance*. Sousa & Bradley (2006, 61) indicate that "psychic distance captures the manager's individual perception of the differences between the home and the host country and is a highly subjective interpretation of reality". Thus, psychic distance is subjective and its impact can vary among the employees within a firm (Sousa & Bradley, 2006) because some employees are more sensitive to differences between the home and the target country than others. This indicates that psychic distance is a cognitive bias.

Cognitive biases are subjective or predisposed opinions that may emanate from specific heuristics (Bazerman, 1990; Busenitz & Lau, 1996). In this sense, perceived psychic distance can be considered a bias which may be driven by other cognitive biases or the source (i.e. prior international experience) itself. Due to their previous job and life experience, owner-managers

develop an indifference to psychic distance between countries. Baack et al. (2015) reported that respondents seem to systematically process the messages that reinforce their pre-existing beliefs while ignoring the messages that contradict their pre-existing beliefs. Pre-existing beliefs arising from their prior experience or exposure to network members or employees having experience in the distant markets may reinforce the entrepreneurs to venture into these markets. We term this as ‘psychic proximity bias’.

Based on the preceding discussion, we propose the following propositions:

***PIa.** The relationship between prior international experience and initial internationalization decision is mediated by overconfidence bias.*

***PIb.** The relationship between prior international experience and initial internationalization decision is mediated by optimism bias.*

***PIc.** The relationship between prior international experience and initial internationalization decision is mediated by psychic proximity bias, such that the higher the prior international experience, the higher the psychic proximity bias the manager-entrepreneurs will perceive, and so endeavor to early internationalization (potentially to psychically distant markets).*

### **Post entry/subsequent internationalization stage: post-entry conditions and cognitive heuristics and biases**

Turning to the post-entry decisions of international owner-manager, several heuristics and biases impact the subsequent internationalization decision in this stage. Since heuristics and biases vary according to context, one specific heuristics or bias responsible in the initial internationalization stage might lose power in the later stage of internationalization (Bryant, 2007). We posit that entrepreneurs who seem to be endowed with *overconfident bias* in their initial entry (which was

exemplified by their entry into psychically and geographically distant markets) may ultimately be prone to *status quo bias* in their subsequent entries because their experiential learning in initial market entry reduces the overconfidence and they now stick to the lower committed entry modes and enter the less uncertain markets. *Status quo bias* is the tendency of people to prefer things to stay the same by doing nothing or by sticking with a decision made previously (Samuelson & Zeckhauser, 1988). The more the managers emphasize on maintaining the *status quo* in a strategic decision-making process, the more likely they will be exposed to limited alternatives and tend to bring prior hypotheses to decisions (Das & Teng, 1999). Again, *optimism bias* which was at play during earlier entry (exemplified by their entry into psychically and geographically distant markets) diminishes as the entrepreneur gains experiences in their initial entry into markets (Fraser & Greene, 2006), thus preferring the options to adopt a lower committed entry mode and target closer and similar markets. Certain entry modes and markets may be associated with more probability of success and better performance and ideal in certain situations, but in reality what owner-managers do might not always reflect what they should be doing (Hennart & Slangen, 2015). This is why managerial decisions are not fully rational and thus influenced by the heuristics and biases they produce. Three reasons have been attributed to the adoption of prior entry modes in subsequent internationalization (Hennart & Slangen, 2015), which can be extended to market selection decision too and can be explained by cognitive heuristics and biases:

**(a) Managers learn from prior decisions** (Padmanabhan & Cho, 1999; Vermeulen & Barkema, 2001): We argue that these prior decisions may induce entrepreneurs to *availability heuristic* (the ease with which specific instances come to mind: Tversky & Kahneman, 1973) to follow the prior or existing choices without searching for new information.

The availability heuristic, where the probability that an event or situation will occur is assessed according to the facility with which the decision-maker is able to recall similar events or situations. This is the heuristic used, for example, by entrepreneurs who decide not to launch a new venture in a given sector after learning of the highly mediatized problems experienced by other firms in that sector- a decision that may have been different if the information had not been immediately available.

Although overconfident managers with sufficient prior international experience tend to enter distant markets in initial entry by perceiving *psychic proximity bias*, their experiential learning in initial market entry now make them realize that they were wrong in perceiving a low psychic distance before the first entry. Now they are influenced by *psychic distance bias*. Sinha et al. (2015) reported that during the process of market expansion, firms encounter the psychic distance paradox: despite experiential learning, managerial perceptions of psychic distance increase, making entry into more distant markets less, rather than more, likely and reactive, rather than proactive.

**(b) Managers may also imitate prior choices**, either ritualistically or to establish intra-firm or local external legitimacy (Ang et al., 2015; Guillén, 2003; Yiu & Makino, 2002): We argue that this can happen due to *status quo bias* which motivates entrepreneurs to stick with a decision already made by other entrants in the host country. For example, Davis et al. (2000) found that two sources of isomorphic pressures affect a firm's entry-mode choice: host country institutional environment and internal institutional environment (the parent organization). The results indicated that SBUs using wholly-owned entry-modes demonstrated high levels of internal (parent) isomorphism; those using exporting, joint ventures, or licensing agreements demonstrated external isomorphism. This firm level behavior has its origin in individual behavior, which is managers'

reluctance to deviate from the current ways of doing things, which can best be explained by the *status quo bias* of individuals.

**(c) Managers may stick to the previously taken decisions due to the continued presence of key factors** (Hennart & Slangen, 2015): We argue that these key factors can be *endogenous* (such as cultural difference among partners, lower levels of human resources and internal capabilities, and partner opportunism) or *exogenous* (such as market uncertainty, rapid technological change, institutional distance between host and home countries, corruption, and weaker intellectual property rights in the host country) limiting factors which constrain entrepreneurs to adopt a different entry mode or a particular market entry. If these conditions are severe, entrepreneurs and managers will perceive a higher level of psychic distance between the countries and will follow a cautious and more rational approach to commit to the existing markets and expand to the new ones. Thus we propose:

***P2a.** The relationship between post-entry conditions and subsequent internationalization is mediated by availability heuristic.*

***P2b.** The relationship between post-entry conditions and subsequent internationalization is mediated by status quo bias.*

***P2c.** The relationship between post-entry conditions and subsequent internationalization is mediated by psychic distance bias, such that the more acute the post entry conditions, the higher the psychic distance bias the manager-entrepreneurs will perceive, and so endeavor to a more calculative and rational internationalization (potentially to psychically close or similar markets).*

## **IMPLICATIONS**

In a recent analysis of entrepreneurship research carried out from a cognitivist standpoint, Gregoire et al. (2011) observed that cognitive variables were studied mainly as independent variables, in other words, researchers were mostly interested in their impacts on other variables, rather than in their origins and development. As Cossette (2015) identified, there has been no direct research on the following question: How are heuristics and cognitive biases formed, and are they changed by the individual's entrepreneurial experiences? Answers to such questions will require both qualitative, longitudinal research designs as well as hypothetic-deductive explanations. In this paper, we use existing theory from heuristics and bias to inform potential answers to Cossette's questions. We propose this as a first step in understanding how heuristics and biases change from pre- to post internationalization.

Although biases help individuals cope with their cognitive limitations, they may result in less rational, less comprehensive decision-making (Barnes, 1984). These biases often arise when making complex and uncertain decisions (Schwenk, 1988), and may be especially prevalent among entrepreneurs (Busenitz & Barney, 1997). It may be possible, also, to prevent or eliminate the heuristics and biases, or teach managers and entrepreneurs to deal with them in a positive way. In doing this, researchers would benefit from taking a closer look at the techniques proposed by Russo & Schoemaker (1992) to reduce overconfidence in decisions, the ideas of Roxburgh (2003) concerning neutralization of different cognitive biases in strategy, and the list of questions prepared by Kahneman et al. (2011) for managers wishing to avoid bias in their decisions.

While heuristic is thought of as positive, it may be negative in itself, in addition to producing both positive (Cummins & Nistico, 2002) and negative (Crane et al., 2007) cognitive biases. Therefore, some heuristics and biases might prove beneficial where others might be

detrimental in internationalization. In light of our research model, as we have observed (which is also confirmed by the findings of Sinha et al. (2015), the biases, specifically overconfidence bias originated from entrepreneurs' prior international experience invokes a false sense of psychic proximity, which might prove detrimental in the performance outcomes of the EIFs. Therefore, manager-entrepreneurs should weigh their prior international experience against the psychic distance or proximity bias, which is not the actual rather the perceptual distance the managers and entrepreneurs perceive.

## **CONCLUSION**

Cognitive biases are systematically associated with strategic decision processes and different decision processes tend to accentuate particular types of cognitive bias (Das & Teng, 1999). The interpretation of biases depends on the representations of individual entrepreneurial decisions as well as the extent of the match between decision ecologies and the evolutionarily adapted mechanisms that underlie the bias (Zhang & Cueto, 2017). This is why overconfidence bias positively influences to create new international venture but lose its power in entry mode and market selection decisions in the later stage of internationalization. While in the early stage of market entry, the overconfident manager-entrepreneurs discounted the psychic distance due to their previous international experience, in the later stages, they become more conservative as more uncertainties are revealed and risk increases with international experience, thereby inhibiting internationalization, and in some cases inducing de-internationalization (Liesch et al., 2011). Therefore, 'the influence of cognition in internationalization decision making is both important and complex' (Clark et al., 2017, p. 442). We hope our model will solve some of the conflicting views on early internationalization and the role of psychic distance in our attempt to explain them from the theoretical perspective of cognitive heuristics and biases.

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