

---

Faculty of Business

Faculty Publications

---

This is a post-print version of the following article:

Accidental tourists? A cognitive exploration of serendipitous internationalisation,  
*International Small Business Journal: Researching Entrepreneurship*

Andreea N. Kiss, Wade M. Danis, Sudhir Nair, and Roy Suddaby

2019

The final publication is available at:

<https://doi.org/10.1177/0266242619884032>

---

Citation for this paper:

Kiss, A. N., Danis, W. M., Nair, S., and Suddaby, R. (2019). Accidental tourists? A cognitive exploration of serendipitous internationalization. *International Small Business Journal: Researching Entrepreneurship*, 38(2), 65-89.

<https://doi.org/10.1177/0266242619884032>

# ACCIDENTAL TOURISTS? A COGNITIVELY ANCHORED EXPLORATION OF SERENDIPITOUS FOREIGN MARKET ENTRIES

## ABSTRACT

A substantial body of research views initial foreign market entries (FMEs) as intentional and deliberately planned by proactive entrepreneurs. However, prior research suggests that FMEs may also occur through serendipitous processes. Yet their cognitive underpinnings are not well-understood. We take an international opportunity recognition (IOR) perspective and investigate the cognitive underpinnings of serendipitous FMEs and their evolution over time in six ventures located in three emerging economies. We highlight differences in founder causal logics and cognitive attributes that allow for causal logic updates and therefore oscillations between serendipitous and planned FMEs. We extend research on IOR and international entrepreneurship.

### 1. Introduction

The identification and exploitation of opportunities for international exchange is a phenomenon that is foundational to entrepreneurship, strategic management, and international business (IB) scholarship yet it remains poorly understood in many respects. Predominant theories of internationalization, including work in international entrepreneurship, often implicitly assume that foreign market entry (FME) is preceded by a series of proactive, rational and deliberately managed strategic decisions with respect to market selection, entry mode, timing, and other relevant considerations that are made on the basis of objective, systematically gathered information and firm-performance-maximizing objectives (e.g., Oviatt & McDougall, 1994; McDougall & Oviatt, 2000; Root, 1977; Young et al., 1989).

However, empirical and anecdotal evidence suggests that initial FMEs in particular are not always strategic or systematic (Crick & Spence, 2005; Ellis, 2000; Kalinic, Sarasvathy &

Forza, 2014; Kiss, Danis, & Cavusgil, 2012). Whereas some firms may follow a push-oriented approach to internationalization, proactively searching for and managing FMEs, others may internationalize in a reactive or serendipitous manner as they are pulled into international markets (e.g., Cavusgil & Godiwalla, 1982; Crick & Spence, 2005; Kiss, Williams, & Houghton, 2013; Meyer & Skak, 2002). Likewise, although some research suggests that FMEs will be more successful if carefully planned and scripted (e.g., Root, 1994; Young et al., 1989), other studies find that internationalization may be more successful when it is improvised and opportunistic (Bingham, 2009; Kuemmerle, 2005; Zahra, 2005). Yet, our understanding of serendipitous FMEs is limited. We suggest that an international opportunity recognition (IOR) perspective on FMEs coupled with a cognitive approach may provide a useful theoretical lens through which to understand serendipitous FMEs. Consistent with prior research (e.g., Dew, 2009; Hohenthal, Johanson, & Johanson, 2003), we use the term serendipitous to denote FMEs that occur as the result of an opportunity recognition process that is sparked through a chance event in which the founder has no preexisting internationalization intent, and that is retrospectively qualified as positive.

IOR has often been equated with the initiation of international sales by young firms (Di Gregorio, Musteen, & Thomas, 2008) and has been examined from a variety of perspectives, such as social networks (e.g., Coviello & Munro, 1997; Coviello, 2006; Ellis, 2011), industry, resources, and capabilities views (e.g., Oviatt & McDougall, 2005; Chandra, Styles, & Wilkinson, 2009). Implicit in this stream of research is the notion that IOR is a *cognitive* process. However, most normative IE theorizing (e.g. Oviatt & McDougall, 1994, 2005) and subsequent empirical research (e.g. Acedo & Florin, 2006; Acedo & Jones, 2007) has tended to assume that internationalization is preceded by a proactive, planned, or intentional search for opportunities

and has focused on capturing cognitive attributes (e.g., tolerance for ambiguity, risk perception) that support such a process leaving the issue of serendipitous FMEs unexplored. Further this stream of research has mostly taken a cross-sectional approach utilizing surveys aimed at capturing individual traits and has not explored in detail the evolution of the cognitive processes involved in FMEs over time.

Preliminary research on serendipitous internationalization (e.g., Crick & Spence, 2005; Kalinic, Sarasvathy & Forza, 2014; Merrilees, Miller, & Tiessen, 1998; Meyer & Skak, 2002) suggests that a focus on individual decision makers and their environmental information-processing capabilities may be especially relevant for serendipitous FMEs. For example, Meyer & Skak (2002) argue that serendipitous FMEs in Central and Eastern Europe (CEE) can only be explained by managers' opportunity recognition abilities, and more specifically their interpretations of the local economic environment. However, research on serendipitous FMEs is in its infancy, and the exact nature of the cognitive processes involved in initial serendipitous FMEs is unclear, as is our understanding of the evolution of these processes over time as entrepreneurs enter new markets. Understanding such processes would not only allow for a more complete perspective on FMEs, including FMEs that are typically relegated to the category of "happy accidents" or "luck", but also on IOR as it unfolds over time.

To explore these issues, we draw on the *cognitive process perspective* on opportunity recognition (e.g., Bhave, 1994; Shane & Venkataraman, 2000; Shepherd, McMullen, & Jennings, 2007; Wood, Williams, & Grégoire, 2012) and research on managerial cognition, particularly research on the role of mental models in information processing (e.g., Calori, Johnson, & Sarnin, 1994; Kiesler & Sproull, 1982; Kiss & Barr, 2015; Nadkarni & Barr, 2008; Nadkarni, Herrmann, & Perez, 2011). We investigate FMEs by six ventures from three emerging

economies (Bulgaria, India, and Romania) and develop a set of theoretically and empirically grounded propositions that can serve as the basis of further research.

We make several important contributions to IOR and IE research. First, we contribute to the literature on IOR (Ellis, 2011; Mainela, Puhakka & Servais, 2014; Reuber et al., 2018; Zahra, Korri & Yu, 2005) by theoretically elaborating the cognitive processes that support serendipitous FMEs, an important yet often overlooked mode of accessing international markets, and their evolution over time. Our study highlights the role of different cognitive mechanisms at different stages in the IOR process as well as cognitive attributes that allow international entrepreneurs to oscillate between serendipitous and planned FMEs. Our study focuses attention on cognitive approaches to IOR and suggests a move beyond social networks, industry, and capabilities views that tend to dominate this stream of research. Second, our study contributes to the broader IE literature by addressing an important research gap related to early internationalization processes of emerging economy firms (e.g., Kiss et al., 2012; Mainela, Puhakka, & Servais, 2014) and answers calls for the use of qualitative methodologies to explore cognitions associated with opportunity recognition (e.g., Bruton et al., 2013; Suddaby, Bruton, & Si, 2015) in such contexts. Third, we push forward the growing stream of research on the role of an effectuation logic in IE (Kalinic, Sarasvathy & Forza, 2014; Sarasvathy, 2001; Sarasvathy et al., 2013) by highlighting when and why it is more likely to be employed. Fourth, by elaborating on the cognitive underpinnings of serendipitous FMEs, which may constitute important foundations for subsequent international growth, our study advances work on the cognitive microfoundations of international growth strategies (e.g., Bruton et al., 2013; Buckley, Devinney, & Louviere, 2007; Maitland & Sammartino, 2015; Prashantham & Floyd, 2012). From a practical perspective, our study suggests the need for a shift in entrepreneurial, managerial, and policy thinking from

predominantly planned approaches to approaches that also embrace flexibility and unanticipated contingencies. It also suggests the need for greater attention to the cognitive makeup (i.e. mental models, motivations) of decision makers and to educational tools and policies that both account for and increase diversity in cognitive makeups.

## **2. Theoretical background**

To study serendipitous FMEs, we rely on three distinct but interrelated research streams: the literature on IOR, the cognitive process perspective on opportunity recognition, and prior research on managerial cognition. To ensure clarity of exposition we discuss below each of these streams in turn (Suddaby, 2006).

### *2.1 The IOR perspective on FMEs*

The uncertainty associated with entry into international markets generated by differences and changes in the institutional, cultural, political, and economic arenas makes an IOR perspective on FMEs extremely relevant (Ellis, 2011; Mainela, Puhakka, & Servais, 2014; Reuber et al., 2018; Zahra, Korri, & Yu, 2005). These differences and changes often produce unexpected events through which opportunities to engage in foreign exchange arise (Hohenthal, Johanson, & Johanson, 2003) and for which individual judgment is required (Casson & Godley, 2007). Following Ellis (2011), we define international opportunity as the chance to engage in economic exchange with new customers in foreign markets. IOR can hence be defined as the cognitive process by which individuals conclude that they have identified such an opportunity (Baron & Ensley, 2006); the firm's entry into the foreign market (via the formation of exchange agreements with new foreign customers) defines international opportunity exploitation. Our research follows Ellis (2011: 101) who rightly notes that: "entrepreneurship cannot be inferred unless opportunities are actually exploited, (so) for all intents and purposes the only meaningful

opportunity is the one that leads to the formation of a new international exchange.” Accordingly, our research focuses only on those opportunities that are exploited or realized.

Two rich streams of research have tackled IOR. *Process based research* has emphasized the importance of firm networks for the generation and exploitation of international opportunities (e.g., Coviello, 2006; Coviello & Munro, 1997, Johanson & Vahlne, 1977; 2003) while *IE research* (e.g., Oviatt & McDougall, 1994) has focused on industry (e.g, firm and individual level factors) that provide the capabilities (i.e., necessary and sufficient conditions) for rapidly capturing international opportunities. Normative IE theorizing has tended to assume that FMEs are the result of proactive, planned, or intentional IOR process. In their seminal article, Oviatt and McDougall (1994: 31) describe international new ventures (INVs) as beginning with a “proactive international strategy” that differentiates them from established multinationals that internationalize more gradually. Further, they define INVs as business organizations that, from inception, seek to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries. More recently, Mathews and Zander (2007: 390) have similarly depicted INVs as a “new species of MNE” whose founders are internationally experienced and global in their outlook, and who vigorously “attack the world market” with innovative strategies in such a way as to differentiate their firms from traditional MNEs.

Although the IE literature generally presupposes that FMEs are the result of a proactive or planned IOR process, and that this translates into accelerated firm internationalization behaviors (i.e. speed and trajectory), this perspective sheds little light on observed instances of unplanned, or serendipitous internationalization (Bell, 1995; Crick & Spence, 2005; Kalinic, Sarasvathy & Forza, 2014; Merrilees et al., 1998; Meyer & Skak, 2002; Sharma & Blomstermo, 2003), or mixtures of planned and unplanned approaches (Coviello, 2006; Coviello & Munro,

1997), that may also result in accelerated internationalization trajectories. Consistent with prior research (e.g., Cunha et al., 2010; Dew, 2009; Hohenthal, Johanson, & Johanson, 2003), we view serendipitous FMEs as FMEs that occur as the result of an opportunity recognition process that is essentially unintended (i.e. the founder has no preexisting internationalization motivation) and that is retrospectively qualified as positive.

Taken together these observations signal the need to more closely focus our attention on the role of *individual level processes* associated with IOR that go beyond proactive or planned perspectives. To address this issues we turn our attention to the broader entrepreneurship literature, in particular to the cognitive perspective on opportunity recognition, and the managerial cognition literature.

## *2.2. The cognitive perspective on the opportunity recognition process and insights from the managerial cognition literature*

Entrepreneurship scholars have long argued that to understand entrepreneurial action (i.e., efforts by individuals to identify, develop and/or pursue ideas for the introduction of products, services or business models into specific markets, including international markets) we need to approach this phenomenon from a *process* perspective (e.g., Bhawe, 1994; Davidsson, 2003; Shane & Venkataraman, 2000) and focus on its distinct stages: identification, evaluation, and exploitation. The process perspective originates in the *discovery school* of thought on opportunity recognition that views opportunities as objective artifacts that are discovered and exploited by alert individuals (e.g., Kirzner, 1973, 1997; Shane, 2000, 2012; Shane & Venkataraman, 2000), and signal an important distinction between *systematic search* for available opportunities and *actual discovery*. Systematic search implies that individuals know the outcomes for which they are searching (e.g., underserved market needs) and make cost-effective



informational investments (i.e., they search when the benefit of the information to be obtained outweighs the cost of obtaining it) (Fiet, 1996, 2002; Stigler, 1961). In contrast, discovery entails *surprise* and the realization that information received by chance may have value attached to it (Kirzner, 1997).

The idea that individuals often discover something that in retrospect turns out to be valuable without deliberately searching for it (i.e., serendipity) is central to scientific progress (Kantorovich & Ne'eman, 1989). However, despite the widely acknowledged importance of serendipity in the scientific literature, the concept of serendipity and its cognitive underpinnings has received relatively little attention beyond observations that serendipity plays a role in the discovery of new or underserved markets, including international markets (e.g., Sarasvathy, 2007; Crick & Spence, 2005; Merrilees et al., 1998) and that individuals' information interpretation and reasoning abilities may play a role in this process (Dew, 2009; Hohenthal et al., 2003; Meyer & Skak, 2002).

The *cognitive perspective on opportunity recognition* views opportunity recognition as a process that consists of both subjective and objective dimensions at each stage (Grégoire, Barr, & Shepherd, 2010; McMullen & Shepherd, 2006; Wood et al., 2012). The objective dimension reflects the context in which individuals operate, whereas the subjective dimension reflects the interpretations that individuals make of that context. At the *identification stage* individuals interpret changes or information signals generated through either internal development of new knowledge or changes in the behavior of relevant actors in the firm's task and general environments. Attention allocation and interpretation processes have a heightened importance at this stage. For example, Shane & Venkataraman (2000) suggest that individuals possess different stocks of information (i.e., mental schemas) that influence their ability to recognize new

information and therefore to recognize an opportunity. However, it is unclear, what aspects related to mental schemas influence initial opportunity identification processes, particularly those that do not involve systematic search.

However, prior work on managerial cognition suggests that structural differences in individuals' existing mental models (i.e., how information is organized in schemas), particularly in their causal logic may be useful to consider here. Causal logic refers to how managers view the relationship between their firm and its environment (Fahey & Narayanan, 1989). A *deterministic causal logic* assumes that managers (founders) are more likely to focus their attention on signals received from the firm's external environment, which they view as the main driver of their actions) while a proactive causal logic assumes that managers (founders) rely more on internally developed knowledge and view their actions as influencing the environment (Barr & Huff, 1997; Fahey & Narayanan, 1989; Nadkarni & Barr, 2008).

As individuals move toward *evaluating* and forming decisions about *exploiting* opportunities, different cognitive processes may become relevant, such as rule-based processing (e.g., rules about market demand, resources and capabilities, the wealth-generating potential of opportunities) and perceptions of feasibility or desirability (e.g., Ardichivili, Cardozo, & Ray, 2003; Choi & Shepherd, 2004; Sarasvathy, 2001, 2014; Shane & Venkataraman, 2000). Some authors suggest that decision processes at the evaluation and exploitation stages tend to be highly systematic and organized, with individuals drawing clear causal links between the opportunity identified, its expected value, and courses of action needed to exploit it profitably (e.g., Kirzner, 1997) thus implying a logic of causation (Sarasvathy, 2001; 2014). A logic of causation takes a particular end goal (e.g., internationalization) as a given and focuses on choosing among means to achieve that particular goal (Sarasvathy, 2001). However, others suggest that decisions to

exploit opportunities are less structured and are indicative of an *effectual logic*. An effectual logic takes a set of means as given and focuses on choosing among many possible end goals using that particular set of means (Sarasvathy, 2001). Effectual logic implies that attributions of expected value are highly influenced by individuals' risk perceptions, optimism or levels of self-efficacy and actions undertaken or imagined toward opportunity exploitation lack predictive value (Dew, 2009; Sarasvathy, 2001, 2014). Individuals employing an effectual logic take a means-based approach and focus on their abilities (i.e. bird-in-hand approach), manage their affordable loss, leverage contingencies (i.e. make lemonade) and often rely on partnerships (i.e. crazy quilt) to expand their existing resources (Sarasvathy et al., 2013).

Finally, research that examines *opportunity recognition over time* (e.g., by serial or portfolio entrepreneurs or in the context of managers engaged in continuous processes of firm strategic adaptation) also provides contrasting perspectives. Some authors suggest that the success associated with an initial venture coupled with high levels of expertise may prompt entrepreneurs to employ similar modes of recognition in subsequent entrepreneurial endeavors (e.g., Westhead, Ucbasaran, & Wright, 2005), thereby suggesting a lack of *flexibility* in updating mental models (Scott, 1962).

However, prior managerial cognition research suggests that managers do update their understandings (i.e., mental models) and the modes in which they identify and interpret environmental signals associated with threats or opportunities, particularly when previous actions taken to exploit similar events are perceived to have clear, in particular negative, links to firm performance (e.g., Barr, 1998). Higher levels of mental model complexity—a structural property that signals a high number of concepts and links associated with an individual's mental

model—might facilitate updates in understandings (Calori et al., 1994; Kiss & Barr, 2015; Nadkarni & Narayanan, 2007).

In summary, prior work provides diverse arguments about the cognitive mechanisms associated with serendipitous opportunity recognition, including serendipitous IOR, and provides limited insights into how these mechanisms change over time. We attempt to elucidate these issues through our study set in the context of internationalizing firms.

### **3. Method**

The aim of this study is to describe and interpret elements of a process that is currently poorly understood in the literature; thus, it may be viewed as a *theory elaboration effort* (Bluhm et al., 2011; Lee, 1999; Suddaby, 2006) that falls under the qualitative research umbrella. In selecting the firms for this study, we used a theoretical sampling approach in which we identified via local Chambers of Commerce and our personal networks privately founded firms, in which the founder was still present, that internationalized within ten years after inception, and that engaged in multiple FMEs<sup>1</sup>. We cast a wide net in selecting firms for our study because there was no method to determine in advance which firms internationalized serendipitously and which firms adopted a proactive approach.

Our initial selection process generated 13 firms from Bulgaria, India, and Romania. Our focus on these countries was driven by theoretical and practical considerations. First, consistent with existing research on serendipitous FMEs (Meyer & Skak, 2002) we conjectured that the dynamic institutional conditions that characterize emerging countries might enhance the likelihood of founders engaging in serendipitous FMEs. Second, our focus on emerging countries answers recent calls to broaden the scope of IE research to encompass a wider range of cultural

---

<sup>1</sup> We note that given our interest in materialized FMEs, our investigation is focused on “realized or exploited international opportunities” (see Ellis, 2011; Baron & Ensley, 2006).

and institutional contexts when examining opportunity recognition (Kiss et al., 2012). Finally, having lived, worked, and traveled extensively in these countries, our research team had a high level of familiarity with them.

### *3.1. Data collection*

Our principal means of data collection was semi-structured interviews with each firm's founder. We followed guidelines on rigorous qualitative research methods (Glaser, 1965; Lincoln & Guba, 1985; Shah & Corley, 2006) and supplemented our interview data with information from firm web sites, e-mails, participant observation (e.g., participation in an annual shareholder meeting, office visits during order fulfillment, and factory visits), phone conversations, and follow-up inquiries to confirm the firm's internationalization trajectory (i.e., FME dates and locations). We conducted follow-up interviews one year after the initial data-collection process to inquire about additional FMEs. In conducting interviews, we allowed sufficient time for our discussions; the duration of the initial interviews ranged from approximately 60 to 90 minutes, with follow-up interviews ranging from 20 to 45 minutes. Overall, this approach has ensured the *credibility* (internal validity) of the data collected and allowed us to explore IOR at different points in time (Goulding, 2002; Krefting, 1991).

Consistent with our theory elaboration approach, interviews were considered an appropriate method of obtaining data because they have “the potential to generate rich and detailed accounts of the individual's experience” (Goulding, 2002, p. 59). Additionally, face-to-face interviews allowed informants to share their “subjective experiences and attitudes” (Perakyla & Ruusuvuori, 2011, p. 529), which was critical to our study and consistent with the theoretical perspective employed (Suddaby et al., 2015). Prior to the meetings, the informants were told only about the general topic of the study (internationalization). During the interviews,

they were prompted to answer open-ended questions about the circumstances in which initial and subsequent FMEs occurred. We used the language of ‘what, who, where, why, when, and how’ to guide the interview protocol (Coviello, 2006; Pettigrew, Woodman, & Cameron, 2001), established a “back-in-time” cognitive frame for our initial interviews, and limited our interventions to the maximum extent possible. We further advised the informants that neither they nor their companies’ identities would be divulged either in the transcribed data or in the results of our research, thereby encouraging candor and further reducing the potential for biased responses. This approach also ensured the *reliability* of the data collected (Shah and Corley, 2006). For the Bulgarian and Romanian informants, the interview protocol was translated, and the interviews were conducted in the informant’s native language. The interviews were recorded, transcribed and (where necessary) translated into English. All of the translations followed standard back-translation procedures. Taken together, these techniques ensured that both researcher biases (e.g., imposing our own view of the internationalization process during data collection) and certain informant biases (e.g., recall bias and misrepresentation) were minimized (Bingham & Davis, 2012; Calori et al., 1994; Eden et al., 1992).

### *3.2. Data preparation and analysis*

We reviewed the literature and developed a broad coding scheme upon which all of the authors agreed. We used a three-stage coding process: we first coded cases based on whether their initial FME was serendipitous or planned, focusing on key words such as “planning”, “strategic”, “intent”, “want” and “desire,” in statements made by entrepreneurs when prompted to speak about internationalization. Cases in which entrepreneurs indicated that they 1) had no initial intention to internationalize, and 2) in which this act was retrospectively viewed as beneficial for the company, were coded as serendipitous. Conversely, cases were coded as

planned when the initial intent to internationalize was mentioned<sup>2</sup>. Six cases were coded as serendipitous and were the primary focus of our theory development. Following Miles & Huberman (1994) opposite cases (i.e., those coded as planned) were used as comparators to confirm/disconfirm the elaborated theory. In the few instances in which there was disagreement on the initial coding (there was unanimous agreement on 11 of the 13 cases, representing 84.6% agreement), we discussed our rationales, reexamining the transcripts and relevant literature, until consensus was achieved. Although we asked open-ended questions, none of our respondents mentioned foregone or abandoned FMEs (i.e. FMEs that were not beneficial for the company). Foregone or abandoned FMEs would signal the existence of additional categories; however, they would not fit into the definition of serendipitous FMEs.

We constructed profiles for each firm, including demographic data about the firm (e.g., founding date, size, and products/services) and its founder-manager(s) (e.g., age, educational background, industry, and international experience). Next, we created a detailed chronology of the processes by which initial and subsequent international opportunities were identified and exploited. This approach also allowed us to identify key stages (e.g., identification and exploitation) in the opportunity recognition process for both initial and subsequent FMEs. The profiles are summarized in Table 1.

Insert Table 1

We next classified the *nature* of the environmental signals or changes that surrounded initial opportunity identification and indicated whether signals or changes arose from the

---

<sup>2</sup> We use a dichotomous characterization of internationalization (i.e., serendipitous vs. planned) that focuses closely on the existence (absence) of initial intent to internationalize (as described by the founder) and thus to highlight two extreme theoretical categories; this approach is consistent with theory elaboration principles (e.g., Miles & Huberman, 1994; Eisenhardt, 1989). Planned cases were used to confirm/disconfirm the elaborated theory.

development of new knowledge by individuals, changes in the entrepreneur's interpersonal networks (e.g., a happenstance new connection), the firm's task environment (e.g., actions by competitors or customers), or the general environment (e.g., market liberalization and global economic downturns) (e.g., Dew, 2009; Wood et al., 2012). We then focused on identifying statements that were relevant to the subsequent stages associated with initial opportunity recognition (i.e., evaluation and exploitation). In the final stage, we coded subsequent FMEs as either serendipitous or planned.

Given the anticipated importance of founders' mental models at the opportunity identification stage, we turned our attention to prior research on managerial cognition to identify a method for capturing mental models. We decided to implement the *causal mapping approach* (Axelrod, 1976) because it allowed us to generate visually interpretable cognitive maps and explore their key structural attributes, such as the overall complexity of the map or the type of causal logic that it reflects. Causal mapping, a qualitative research technique and a form of content analysis, focuses on causal assertions within documents (e.g., interview transcripts, letters to shareholders etc.) (Eden, 1992; Huff, 1990; Nelson et al., 2000). To minimize the impact of researcher biases in interviews, on the outcome of analyses associated with causal maps, we have followed best practices such as the use of coders with similar skills, computation of inter-coder reliability, and controlled for the length of the interviews in our analyses. In implementing the causal mapping approach, we focused on identifying cause-effect statements or statements that contained words such as "if," "because," "as," "so as," etc. Building on the idea that mental models are cognitive structures that represent organized knowledge about a given concept or circumstance (such as the firm, its resources, and its environment) and contain both attributes of the concept and the relationships among the attributes (e.g., Daft and Weick, 1984;



Fiske and Taylor, 1991), we focused on manually identifying statements made by founders that depicted causal relationships among *firm actions*, *firm resources*, *firm performance*, and the *environment*. Prior research on managerial cognition (e.g., Calori et al., 1994; Kiss and Barr, 2015; Nadkarni and Barr, 2008) suggests that these four broad categories are most relevant when focusing on the mental models of the individuals charged with a firm's strategic direction.

In the first step, two raters (an author and a graduate MBA student blind to the study's purpose) independently identified these statements. We assessed the interrater reliability at the 95% confidence interval level by using percent agreement (88.3%) and Cohen's kappa ( $\kappa = 0.812$ ). In the second step, the same coders separated causal statements into causes and effects (98.8% agreement,  $\kappa = 0.932$ ) and generated raw "environmental," "firm action," "resources," and "performance" concepts to build raw causal maps. This process generated 101 raw concepts. In the third step, we used prior research on managerial cognition (e.g., Kiss and Barr, 2015; Nadkarni and Barr, 2008) and existing theoretical frameworks to develop broad conceptual categories representing the environment, firm action, resources, and performance. In the final step, we asked two additional blind coders—experts who were familiar with strategic management terminology—to validate the categorization of raw concepts into broad categories (86.2% agreement,  $\kappa = 0.824$ ). To categorize concepts for which agreement was not 100%, we utilized the majority rule. The resulting categorization scheme was similar to categorization schemes previously developed in the literature (e.g., Kiss and Barr, 2015), thus further validating our approach. Sample partial and full causal maps developed after coding the statements for the firms included in our final sample are included in Appendix A. The information included in the maps was used to build Table 2, which presents data on the causal logics employed, and to assess the founder's overall level of cognitive complexity.

#### 4. Findings

Consistent with the cognitive process perspective on opportunity recognition and our goal of investigating both initial and subsequent FMEs, we present our findings in a sequential manner, from initial international opportunity identification and exploitation to subsequent international opportunity identification and exploitation. We first analyzed the precipitating events (environmental changes and information signals) surrounding initial international opportunity identification. For example, the founder of R-Steel had no intent to pursue business opportunities abroad because he was more concerned with attracting attention from potentially large domestic clients. He is still puzzled about how a large French firm was able to contact him only a few months into the firm's existence: *"So after I started, as I told you I started in January 2005, in September 2005 they found us, I don't know how, probably through the Chamber of Commerce and Industry."* B-Pack received visits from prospective customers in neighboring countries as the global financial crisis was unfolding: *"I am almost sure that I am not mixing the year... '98 in the end, which means in the beginning of '99... we had interested customers visiting us from neighboring countries, Serbia, Macedonia. Kosovo was still part of Serbia, so we started selling polyethylene film to Kosovo as well."* Similarly, B-Sport received a visit from an Austrian firm that *"was not selected by some special criteria. [The Austrian partner] came to us and wanted us to work together."* I-Appliance found its products in high demand after rising manufacturing prices forced a large Swedish company to look elsewhere for components: *"Manufacturing in Sweden was not attractive... [Costs] were going up there, so not that attractive. So ultimately, they closed their cylinder factories. They had to buy cylinders from us. That's how our entry into the export market in a good way happened."*

Our analysis suggests that precipitating circumstances or changes and information signals associated with serendipitous FMEs range from chance encounters that result in new interpersonal connections to unexpected actions by known actors in the firm's task environment (e.g., an existing customer that makes an internationalization proposition) to broader shocks or changes in the general environment that present unforeseen opportunities for international exchange. Our analysis further reveals that the informants identified interpersonal connections as the predominant means by which they identified international opportunities (four of the six serendipitous cases). For example, R-Furniture's founder first met his German partner while visiting his sister in Germany; the two became friends and later developed a business relationship that led to the firm's first sale in Germany. Similarly, one of I-Acad's founders learned about internationalization opportunities through a chance connection with an American professor, and R-Steel and B-Sport's founders struck deals with "complete strangers" (i.e., prospective partners from France and Austria looking for cheaper options for sourcing some of their input materials).

Overall, our cases provide evidence of founders' attention to "external" environmental signals occurring in the firm's relational, task, and general environments instead of internal goals or motivation to solve specific issues (e.g., the procurement of specific resources) or problems (e.g., poor firm performance) at this stage. Our findings also suggest that venture founders notice *both* signals related to their prior knowledge and experience (e.g., Shane & Venkataraman, 2000) (because they are particularly attuned to signals received from their existing network partners) and unfamiliar signals that "stand out" against the general background (e.g., political crisis, economic downturn) or originate from happenstance encounters (Shepherd et al., 2007; Styles, 2006). This suggests the existence of a common underlying mechanism that explains the founders' focus. Specifically, the founders' *causal logics* (i.e., the relationship between a firm

and its environment as reflected in a mental schema) may be a reason that some founders are particularly likely to focus their attention on the firm's external environment (Barr & Huff, 1997; Fahey & Narayanan, 1989). Founders with a *deterministic* causal logic believe that the environment influences their actions and are therefore more attuned to changes occurring in their environments, which they view as primary drivers of action. In contrast, founders with a *proactive* causal logic believe that their actions influence the environment (Nadkarni & Barr, 2008). The causal mapping performed on the six serendipitous cases revealed that each of their founders initially employed a deterministic causal logic. Table 2 lists the number of deterministic and proactive links for each serendipitous founder during initial opportunity identification and suggests that founders viewed most of the organizational actions (not just international actions) taken during this initial stage as determined by the environment. For example, all of the cases in the first row of Table 2 list a higher number of environment-organizational action links than organizational action-environment links (second row of Table 2). Furthermore, the absence of organizational action-environment links (second row of Table 2) for R-Furniture, I-Acad, and I Appliance suggests that those firms' founders operated with a purely deterministic causal logic at the initial opportunity identification stage.

Insert Table 2 here

Figure A.1 (in Appendix A) graphically illustrates this point for R-Steel and B-Sport. We suggest that:

*Proposition 1) Founders are more likely to employ a deterministic causal logic in the opportunity identification stage of serendipitous FMEs.*

We next turned our attention to decisions associated with the *exploitation* of opportunities in serendipitous FMEs. We found that, consistent with prior research (e.g., Wood et al., 2012;

Wood & Williams, 2014), founders relied on certain rules regarding market demand, resources, and opportunity wealth-generating potential to assess the viability (attractiveness) of international opportunities and engage in the exploitation of those opportunities. However, the manner in which founders applied these rules suggest a relatively unstructured approach, with founders making attributions of expected value and use of resources based on various personal attributes such as risk perceptions, optimism, and levels of self-efficacy (Muzychenko & Liesch, 2015), along with imagining and/or devising actions that lacked predictive value (e.g., Sarasvathy, 2001, 2014). These findings suggest that when deciding to exploit serendipitously discovered opportunities, entrepreneurs may employ an *effectual logic* (Dew, 2009; Sarasvathy, 2001; Sarasvathy et al., 2014). Key effectuation principles that we identified include affordable loss, pilot-in-the-plane (lemonade) and crazy quilt. We offer evidence supporting this finding in Table 3 and note that the quotations often highlight more than one principle.

Insert Table 3 here

For example, B-Pack's founder emphasizes, *"Until this so-called global crisis came, the Bulgarian market was probably near 80%. The crisis forced us, thank God, to look for new markets and countries."* *"We had the necessary equipment and capabilities to do it... because it is not easy."* *"The equipment is expensive. Our last investment was nearly 15 million BGN. So, to start doing this during a crisis is just absurd."* He then focused on "affordable" losses: *"We focused on these countries because they are close to us, shipping costs are negligible, there is no language barrier, no need for a qualified management team that offers production."* Once again, this founder again demonstrated an aversion to planning—and implicitly, causation—when asked about the organization of existing and near-future export operations: *"In the next five*

*years, whoever and whatever anyone is saying, he/she is either going to be dreaming or complaining, or he/she would be a shaman.”*

B-Sport’s founder emphasizes that the organization of export activities, in light of new EU standards, “...*had to happen, and it didn’t matter for us what we had to do.*” R-Furniture’s founder’s more general perspective on the company’s founding process and subsequent internationalization suggests that “making lemonade out of lemons” is an integral part of embracing and exploiting the unexpected: “*It was an opportunity, and generally very much I... at least the decisions I made or the decisions about what happened with R-Furniture, because I made decisions as I went on, they were made, let’s say, as opportunities showed up. Because we were at such small level, you couldn’t, how should I say, you couldn’t make decisions so that you can say that in a year I’ll do this. I mean it was very little predictability for what would come next. Especially the way the market was.*” Taken together this evidence suggests that:

*Proposition 2) Founders are more likely to employ an effectual logic in the opportunity exploitation stage of serendipitous FMEs.*

Our analysis of the opportunity identification processes associated with subsequent FMEs revealed that in four of the six serendipitous cases, a shift toward more purposeful approaches occurred. The pattern of attention allocation shifted toward a heightened importance of internally driven sources of change (i.e., development of new knowledge by individuals) for opportunity identification. Furthermore, signals received from the task and general environments were interpreted as cues for actions that shape the environment instead of reacting to it. This suggests a shift toward a proactive causal logic. For example, after some unexpected initial orders and the use of an exclusive partner for ten years, I-Appliance is now actively and directly pursuing partners abroad. B-Pack was able to leverage the experience and knowledge acquired from its

initial customers to subsequent international pursuits. Its founder highlights, *“Alongside our customers, we got an idea and because of the new information, we expanded our production capacity, began to participate in fairs and made a decent range of customers from the countries of former Yugoslavia.”* Although R-Steel was international from its inception in 2005, almost ten years into the firm’s existence, its founder decided to pursue international opportunities more purposefully and aggressively: *“I intend to buy a house at the border of France and Germany this year [2014] and spend two weeks each month in that area to closely monitor business opportunities. I found that something gets lost when communicating via electronic means with the French and they do better with oral communication. I want to be there and personally develop these relationships. I want to focus more on the European market, and the two countries I mentioned in particular.”* I-Appliance’s founder highlights, *“We’re now identifying these fairs through the Indian associations... and we get good customers,”* and *“we have someone in Europe now who’s promoting us.”*

The causal mapping procedure performed on the serendipitous cases provides further evidence for this point and suggests a shift from a deterministic logic to a proactive logic for I-Appliance, R-Steel, B-Pack and I-Acad. Table 2 (fourth row) indicates the higher number of organizational action-environment links as opposed to the number of environment-organizational actions (third row) for the four cases in which the shift occurred. Figure A.1 (in Appendix A) illustrates this point for a case (R-Steel) in which the shift from deterministic toward a proactive causal logic occurred and one (B-Sport) in which this shift did not occur.

Although prior research (e.g., Barr, 1998) generally emphasizes the importance of negative stressors for updates and structural changes in managers’ mental models, the interviews we conducted and the excerpts presented revealed that perceived *success* (e.g., higher

sales and acquisition of new market share or customers) associated with the exploitation of international opportunities initially identified through serendipity may lead to an update to the causal logic used in subsequent opportunity identification. For example, R-Steel's founder views the firm's entry into the French and German markets, "*the economic vortex of Europe,*" as "*something that took us very far*" and now is "*all up to us.*" B-Pack's founder emphasizes that success in the Serbian market translated into "*expanded production capacity*" and the active pursuit of additional markets, whereas I-Acad's founder states that the "*markets we already have (i.e., the U.S. and the E.U.) are so lucrative...*" and that "once they are saturated we will start looking at the other end (i.e., Australia and other countries in Asia)." I-Appliance's founder highlights that Yemen and Saudi Arabia (from which the firm's first unsolicited orders were received in 1996) have been "*big markets for us*" but to anticipate industry trends, "*we are now looking at focusing within Europe, small companies with small requirements.*" These data suggest that:

*Proposition 3a) Founders are more likely to employ a proactive causal logic during the opportunity identification stage of planned FMEs.*

*Proposition 3b) Perceived success associated with the exploitation of international opportunities initially identified through serendipity leads to updates in founders' causal logic and thus to a shift from deterministic to proactive causal logic in subsequent opportunity identification.*

Although successful initial international opportunity exploitation is a common trigger for changes in causal logic, there is significant variation in the amount of time that it takes for founders to update their causal logic or to shift and alternate between the two logics. For example, the results of the data categorization performed on subsequent FMEs and summarized in Table 1 suggest that,



in the case of I-Acad and B-Pack, this update occurred relatively quickly, whereas in the cases of R-Steel and I-Appliance, such updates occurred around the 10-year mark. In contrast, in the cases of R-Furniture and B-Sport, updates have not occurred. An initial comparison of the statements made by the founders of companies whose shifts in logic occurred quickly and the statements made by the founders of companies whose updates occurred slowly (or did not occur) suggested a *flexibility* perspective versus a *cognitive entrenchment* perspective (Scott, 1962; Dane, 2010). For example, R-Steel's, R-Furniture's and B-Sport's founders repeatedly emphasized an exclusive focus on their initial foreign partners for international exchanges. This reliance persists even though none of the firms are contractually precluded from pursuing other international partners and market conditions have substantially changed since their initial internationalization. B-Sport's founder rigidly maintains, *"I'm telling you again, that was determined only by the partners with whom he worked at the time. We do not care about which country, which partner, the name does not apply to us."* In contrast, B-Pack's founder was open to exploring a variety of options to internationalize soon after the firm's initial serendipitous entry into the Yugoslavian market: *"Alongside our customers, we got an idea and because of the new information, we expanded our production capacity, began to participate in fairs and made a decent range of customers from the countries of former Yugoslavia."*

To further support the flexibility perspective, we engaged in additional causal-map analyses. First, visual comparisons of the full causal maps derived from the serendipitous cases suggested that differences in the maps' overall degree of complexity (i.e., the number of concepts and connections among those concepts) might provide some insight into this issue. For example, the I-Acad founder's full causal map exhibited a greater degree of complexity (1.72) than the B-Sport founder's full causal map (1). More specifically, Figures A.2 and A.4 in Appendix A

illustrate a higher number of concepts and links between concepts for I-Acad than for B-Sport. The additional structural analyses performed on the full causal maps (e.g., the formal calculation of the degree of complexity) summarized in Table 2 revealed that entrepreneurs who quickly shifted toward a proactive causal logic exhibited maps with greater degrees of complexity than the entrepreneurs who either did not shift toward a proactive causal logic or who shifted more slowly.

Mental model complexity reflects the individual's ability to draw on multiple perspectives in understanding an issue, thus reducing cognitive inertia or entrenchment and status quo behavior (Calori et al., 1994; Kiss & Barr, 2015). Our evidence suggests that cognitively complex founders will shift faster toward employing a proactive causal logic when initial serendipitous FME opportunities are successfully exploited than less cognitively complex founders. We suggest that:

*Proposition 4) Founders with higher levels of cognitive complexity who perceive serendipitous FME opportunities to be successfully exploited will update their causal logic more quickly.*

We next examined data related to the evaluation and exploitation decisions associated with planned FMEs. Unlike the unstructured manner in which founders applied the rules about market demand, resources, and opportunity for wealth-generating potential during the evaluation and exploitation decisions associated with serendipitous FMEs, we found that in the evaluation and exploitation of purposefully identified international opportunities, the venture founders engaged in relatively structured, systematic, and rational decision-making processes. More specifically, the founders drew clear causal links among the opportunities identified, their expected value, and necessary courses of actions, including resource allocation, to profitably exploit those opportunities (Fiet, 1996; Kirzner, 1997).

Table 4 provides illustrative quotes regarding how founders applied these rules when deciding to exploit opportunities associated with planned FMEs.

Insert Table 4 here

For example, R-Steel's founder is now independently operating in the French market and has very clear expectations about that market's growth potential, allocating significant funds for French marketing and advertising. I-Appliance's founder made several investments in upgrading manufacturing facilities and adjusting the company's product offerings to appeal to European customers: *"So the first thing that we are doing is to upgrade our facilities here, which would appeal to the European customer in terms of how we have it... We are investing in the European market... we developed 0.34-L bottles to appeal to them."* Both B-Pack and I-Acad's founders have recently applied for various grants and subsidies for their current international operations because they have specific financial expectations of these applications. B-Pack's founder emphasizes, *"The project is for approximately 3 million and 300-400 thousand Levs. If we manage, from the European funds we will receive a 2 million Lev refund, which is a serious amount."*

Taken together, this evidence suggests that venture founders are likely to employ a logic of causation in the exploitation of planned FMEs. A logic of causation implies that venture founders view the future as predictable, have clear goals that can be expressed in financial terms, and can mobilize resources to achieve those goals (Sarasvathy, 2001; Sarasvathy et al., 2014). We suggest that:

*Proposition 5) Founders are likely to employ a logic of causation in the opportunity exploitation stage of planned FMEs.*

Figure 1 provides a diagrammatic summary of our findings.

Insert Figure 1 here

## 5. Discussion

We undertook this study to gain a better understanding of serendipitous FMEs and took an IOR perspective to do so. More specifically, we focused our attention on the cognitive underpinnings of serendipitous FMEs to shed light on this phenomenon. Our study highlights that structural differences in founders' mental models, particularly their causal logics, help explain why certain founders focus their attention on external information signals and identify them as opportunities for international actions, while others focus on internally developed knowledge and engage in systematic searches. It also highlights when changes in causal logics are more likely to occur and how they may catalyze shifts in the pattern and nature of international entries.

Founders associated with serendipitous FMEs focus their attention on and interpret signals received from both familiar and unfamiliar sources and do not need a preexisting motivation to identify initial internationalization opportunities. Furthermore, successful exploitation of opportunities associated with serendipitous FMEs does not depend on a systematic and structured process of matching firm-level capabilities with identified opportunities and accurately anticipating their financial value but instead on reasoning processes that consider existing contingencies (e.g., resource limitations). Our findings further suggest that the extent to which founders who initially pursue serendipitous FMEs engage in similar entries over time is strongly dependent on whether they update their causal logic and rely on internally developed knowledge to identify subsequent international opportunities. The perceived success associated with the exploitation of serendipitous FMEs may prompt this update; however, the speed at which this update occurs is strongly influenced by a founder's overall level of cognitive complexity.

## 5.1. Implications for theory

### 5.1.1 Contributions to research on IOR and IE

Taken together, these findings extend research on IOR and on IE (e.g., Chandra et al., 2009; Di Gregorio et al., 2008; Ellis, 2011; Oviatt & McDougall, 2005; Muzychenko & Liesch, 2015; Reuber et al., 2018) in several important ways. First, whereas research on IOR and normative IE theorizing has focused on exogenous country, firm, and industry characteristics to explain differences in FMEs and firm internationalization trajectories, our study extends such work by suggesting that differences in *how individuals interpret these characteristics and act upon* them may be an important but often theoretically overlooked aspect of FME. We suggest that a focus on the individuals engaged in IOR, and in particular a shift in attention from a trait-based approach (e.g. Acedo & Florin, 2006) toward mental model attributes and/or the reasoning processes employed at different stages in the opportunity recognition process can provide new insights into FMEs, in particular initial FMEs that are serendipitous. Such an approach provides a finer-grained perspective on FMEs because it distinguishes theoretically between FMEs that are strategic or planned and those that are serendipitous, and may help explain how FME processes vary in terms of timing, country choices, and internationalization trajectories when explanations based on industry, network or other firm and individual characteristics fall short.

Further, by taking a longitudinal approach and studying both initial and subsequent FMEs our study addresses limitations identified in prior IOR field reviews (e.g. Mainela et al., 2014 and IE (Coviello, Jones, & Tang., 2012) where studies have overwhelmingly focused on initial FMEs using cross-sectional approaches. Our approach enabled us to identify cognitive complexity as an important attribute to consider, particularly in research that explores longitudinal processes of

IOR and serial international entrepreneurship. More specifically, cognitive complexity may help explain the extent to which entrepreneurs engage in *similar* modes of IOR over time and the ease with which they *transition* between serendipitous and planned FMEs.

Second, our findings contribute to prior research on the role of effectuation in IE (e.g., Kalinic, Sarasvathy & Forza, 2014; Sarasvathy, 2001; Sarasvathy et al., 2013). As noted previously, we find that founders who initially lack intent to internationalize employ an effectual logic as they later decide to exploit serendipitous international opportunities, whereas founders who systematically pursue international opportunities are more likely to rely on a logic of causation. This suggests that entrepreneurs may employ different decision processes (effectual vs. causal) and causal logics (proactive vs. deterministic) depending on the nature of the international opportunity (serendipitous vs. planned) and the stage of FME (identification vs. exploitation). By illuminating some of the contingencies that determine when different decision processes and causal logics are more/less likely to be used, our study provides more precision to the growing stream of work on effectuation in IE (e.g., Kalinic, Sarasvathy & Forza, 2014), and empirical validation for the notion that effectuation and serendipity are intertwined (Dew, 2009).

Third, our research answers calls (e.g., Di Gregorio et al., 2008; Kiss et al., 2012; Mainela et al., 2014) for research that employs theory (i.e. mental models) and methods that allow for explorations of the cognitive processes associated with IOR in a wider range of country contexts, in particular emerging economies, and thus increases the relevance and rigor of IE research.

#### *5.1.2. Contributions to research on microfoundations of firm international strategy*

On a more general level, our study answers calls in the IB and strategy literatures for work that increases understanding of the microprocesses associated with the implementation of

an important firm growth strategy, internationalization (Bruton et al., 2013; Buckley et al., 2007; Foss & Pedersen, 2014; Prashantham & Floyd, 2012). A large body of this research points to the importance of *cognitive* microfoundations to understand internationalization decisions yet research in this area has been lagging behind. For example, only recently have scholars (e.g., Bingham, 2009; Maitland & Sammartino, 2015) begun to link aspects related to managerial cognition to international actions and to highlight the difficulty with which old protocols are unlearned and how this may negatively impact internationalization outcomes. Our study takes this line of research further by emphasizing the conditions under which protocol updates are possible. In doing this we provide evidence for how cognitive complexity facilitates protocol updates and may thus become an important managerial cognitive capability (Helfat & Peteraf, 2015).

By exploring the evolution of different aspects of founder mental models from initial internationalization until the firm reaches a certain level of maturity we provide more clarity on the origins, evolution and variation in firms' international strategies. More importantly our study highlights that the origins of a firm international strategy need not rest on a planned, proactive approach and points to the importance of adding a cognitive view to research aimed at understanding international strategy formation and evolution.

### *5.2. Implications for practice*

Our work has important implications for practicing or aspiring entrepreneurs, for policy makers, and for entrepreneurship educators. As noted by Dew (2009), much normative research implies that entrepreneurs should make carefully considered, cost-effective investments in information that signal the value of opportunities (Fiet, 2002), whereas research on spontaneous recognition suggests that opportunities can and will be discovered without active search (Shane,

2000). Our research suggests that both approaches can be viable depending on the nature of the opportunity and stage of FME. This implies that entrepreneurs need to find the right balance between attending to and dismissing unexpected contingencies. While the business planning approaches advocated in many entrepreneurship programs certainly have value, our work suggests that entrepreneurs should acknowledge and, where possible, leverage serendipity. Moreover, when business-planning approaches are adopted by policy makers, educators and small business owners (e.g., the requirement of a formal business plan as a precondition for financing or acceptance into a business incubator), those approaches should be used flexibly such that unanticipated contingencies may be better exploited.

The serendipitous opportunities encountered in our study were most often the result of happenstance social network connections. To the extent that there are non-trivial linkages between serendipitous opportunities and the nature of one's social network entrepreneurs may be able to engage in networking behaviors that make them more likely to make such connections (Dew, 2009). For instance, Garud and colleagues (2018) discuss a number of "serendipity arrangements" that bring together diverse individuals, groups and resources as a means of catalyzing serendipitous discovery. Examples include technology and science fairs, workshops, incubators, accelerators, science parks, coworking spaces, entrepreneurial boot camps and other such venues. A willingness by entrepreneurs to engage in these types of arrangements can provide access to richer social networks that may yield valuable, if unexpected, opportunities (Cunha et al., 2010). A related issue is whether policy makers can foster conditions that encourage serendipitous FMEs and how this can best be accomplished. Entrepreneurship and small business development policies geared toward business planning are quite common and relatively easy to conceive and implement, whereas the unpredictable nature of serendipitous



FMEs may make planning them seem counterintuitive. Nonetheless, it may be possible to “engineer” serendipity (Lindsay, 2013) by creating contexts, like the serendipity arrangements mentioned previously, that encourage entrepreneurs to develop more extensive interpersonal networks in which happenstance connections may prompt recognition of previously unforeseen internationalization opportunities.

A final important takeaway is that founders who do not purposefully plan FMEs may still be able to reap benefits similar to those enjoyed by entrepreneurs who do. However, as founders’ views of the world change over time, and as environmental conditions change, it becomes important to develop and invest in cognitive capabilities (such as complexity) that allow them to adapt quickly to emergent conditions. The need for founders to “complicate” (Weick, 1979:261) their understandings may be heightened in dynamic contexts, such as those in emerging economies, and may enhance or substitute for firm-level capabilities such as speed to market or foreign market knowledge competence. Research conducted in social cognition suggests that cognitive complexity may be increased if individuals are repeatedly exposed to diverse and novel situations, settings, and people (Fee, Gray & Lu, 2013). In the context of internationalizing firms and their founders this means that founders with more extensive, diverse, and challenging life-experiences (not just business experience) are more likely to exhibit higher levels of cognitive complexity.

## **6. Contextual boundaries, limitations, and future research**

Several contextual boundaries and limitations associated with our study may warrant future research. First, the study’s external validity might be limited to the context of internationalizing firms, particularly those that internationalized early in their existence. However, FMEs and opportunity recognition processes are also relevant for mature or diversified

firms. The extent to which serendipitous FMEs occur in these settings, and the role that is played by managerial and/or founder cognition in the process of IOR, is an important empirical question.

Second, the nature of our research question prompted us to select a sample of cases from emerging economies. Although this approach allowed us to address criticism related to theory building from developed country samples, it is not without limitations. Previous research has documented instances of serendipitous internationalization in developed-economy contexts (e.g., Chandra et al., 2009; Crick & Spence, 2005; Meyer & Skak, 2002) and recent works have highlighted the consistency of bricolage type behaviors –a construct related to effectuation- across countries (e.g., Sunduramurthy et al., 2016). However, future comparative research that addresses this issue in other national contexts will provide for further refinement and testing of our theorizing.

Third, the methodology employed has both strengths and weaknesses. Interview-based case studies allowed us to focus on a phenomenon that is retrospective in nature (i.e., serendipitous FMEs) and hard to capture through real-time methodologies given its unpredictability, and to employ causal mapping to capture structural properties associated with mental models. However, this approach did not allow us to capture other cognitive processes that are relevant for opportunity recognition. Future research employing ethnographic or experimental methods might help address this issue.

The propositions put forward in our study may be tested by employing a mixed-methods large-scale longitudinal research design. Using a sample of publicly traded new ventures scholars may access annual reports and letters to shareholders that would allow them to capture founder cognition close to the moment in which FME related decisions were made. Interview data could

be used to assess the nature (planned vs. serendipitous) of the firm's FMEs. Advances made in the managerial cognition literature employing cognitive mapping using computer generated dictionaries and scripts (e.g., McKenny et al., 2016; Short, McKenny, & Reid, 2018) would facilitate the tracing of changes in causal logics and mental model attributes for a larger sample of international entrepreneurs.

In spite of its limits, our study sheds new light on serendipitous FMEs, calling into question key assumptions on the nature of initial and subsequent IOR processes. It is our hope that this study, and the questions raised herein, will spur additional research on the nature of IOR in a wider range of national contexts.

## References

- Acedo, F. J., & Florin, J. (2006). An entrepreneurial cognition perspective on the internationalization of SMEs. *Journal of International Entrepreneurship*, 4, 49-67.
- Acedo, F. J., & Jones, M. V. (2007). Speed of internationalization and entrepreneurial cognition: insights and a comparison between international new ventures, exporters and domestic firms. *Journal of World Business*, 42, 236-252.
- Ardichvili, A., Cardozo, R. & Ray, S. (2003). A theory of entrepreneurial opportunity identification and development. *Journal of Business Venturing*, 18, 105–123.
- Axelrod, R. (1976). *Structure of Decision: The Causal Maps of Political Elites*. Princeton, NJ: Princeton University Press.
- Baron, R. A. & Ensley, M. D. (2006). Opportunity recognition as the detection of meaningful patterns: evidence from comparisons of novice and experienced entrepreneurs. *Management Science*, 52, 1331–1344.
- Barr, P.S. (1998). Adapting to unfamiliar environmental events: a look at the evolution of interpretation and its role in strategic change. *Organization Science*, 9, 644–669.
- Barr, P. S. & Huff, A. S. (1997). Seeing isn't believing: understanding diversity in the timing of strategic response. *Journal of Management Studies*, 34, 337–370.
- Bell, J. (1995). The internationalization of small computer software firms: A further challenge to “stage” theories. *European journal of marketing*, 29(8), 60-75.
- Bhave, M.P. (1994). A process model of entrepreneurial venture creation. *Journal of Business Venturing*, 9, 223–242.
- Bingham, C. B. (2009). Oscillating improvisation: how entrepreneurial firms create success in foreign market entries over time. *Strategic Entrepreneurship Journal*, 3, 321–345.
- Bingham, C. B., & Davis, J. P. (2012). Learning sequences: Their existence, effect, and evolution. *Academy of Management Journal*, 55(3), 611-641.
- Bluhm, D. J., Harman, W., Lee, T. W. & Mitchell, T. R. (2011). Qualitative research in management: a decade of progress. *Journal of Management Studies*, 48, 1866–1891.
- Bruton, G. D., Filatotchev, I., Si, S. & Wright, M. (2013). Entrepreneurship and strategy in emerging economies. *Strategic Entrepreneurship Journal*, 7, 169–180.
- Buckley, P. J., Devinney, T. M. & Louviere, J. J. (2007). Do managers behave the way theory suggests? A choice-theoretic examination of foreign direct investment location decision-making'. *Journal of International Business Studies*, 38, 1069–1094.
- Calori, R., Johnson, G. & Sarnin, P. (1994). CEOs' cognitive maps and the scope of the organization. *Strategic Management Journal*, 15, 437–457.
- Casson, M., & Godley, A. (2007). Revisiting the emergence of the modern business enterprise: entrepreneurship and the Singer global distribution system. *Journal of Management Studies*, 44(7), 1064-1077.
- Cavusgil, S. T. & Godiwalla, Y. M. (1982). Decision-making for international marketing: a comparative review. *Management Decision*, 20, 47–54.
- Chandra, Y., Styles, C. & Wilkinson, I. (2009). The recognition of first time international entrepreneurial opportunities: evidence from firms in knowledge-based industries. *International Marketing Review*, 26, 30-61.
- Choi, Y.R. & Shepherd, D.A. (2004). Entrepreneurs' decisions to exploit opportunities. *Journal of Management*, 30, 377–395.

- Coviello, N. E. (2006). The network dynamics of international new ventures. *Journal of International Business Studies*, 37, 713–731.
- Coviello, N. & Munro, H. (1997). Network relationships and the internationalisation process of small software firms. *International Business Review*, 6, 361-386.
- Crick, D. & Spence, M. (2005). The internationalisation of 'high performing' UK high-tech SMEs: a study of planned and unplanned strategies. *International Business Review*, 14, 167–185.
- Cunha, M. P., Clegg, S. R., & Mendonça, S. (2010). On serendipity and organizing. *European Management Journal*, 28(5), 319-330.
- Daft, R.L. & Weick, K.E. (1984). Toward a model of organizations as interpretation systems. *Academy of Management Review*, 9, 284–295.
- Dane, E. (2010). Reconsidering the trade-off between expertise and flexibility: a cognitive entrenchment perspective. *Academy of Management Review*, 35, 579–603.
- Davidsson, P. (2003), The domain of entrepreneurship research: some suggestions, in J.A. Katz, D.A. Shepherd (Eds.) *Cognitive Approaches to Entrepreneurship Research (Advances in Entrepreneurship, Firm Emergence and Growth, Volume 6)* (pp.315 – 372). Bingley, UK:Emerald Group Publishing Limited.
- Dew, N. (2009). Serendipity in entrepreneurship. *Organization Studies*, 30, 735–753.
- Di Gregorio, D., Musteen, M. & Thomas, D. E. (2008). International new ventures: the cross-border nexus of individuals and opportunities. *Journal of World Business*, 43, 186-196.
- Eden, C., Ackermann, F. and Cropper, S. (1992). The analysis of cause maps. *Journal of Management Studies*, 29, 309–24.
- Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review*, 14, 532–550.
- Ellis, P. (2000). Social ties and foreign market entry. *Journal of International Business Studies*, 31, 443–469.
- Ellis, P. D. (2011). Social ties and international entrepreneurship: opportunities and constraints affecting firm internationalization. *Journal of International Business Studies*, 42, 99–127.
- Fahey, L. & Narayanan, V. K. (1989). Linking changes in revealed causal maps and environmental change: an empirical study. *Journal of Management Studies*, 26, 361–378.
- Fee, A., Gray, S. J., & Lu, S. (2013). Developing cognitive complexity from the expatriate experience: Evidence from a longitudinal field study. *International Journal of Cross Cultural Management*, 13(3), 299-318.
- Fiet, J.O. (1996). The informational basis of entrepreneurial discovery. *Small Business Economics*, 8, 419–430.
- Fiet, J.O. (2002). *The Systematic Search for Entrepreneurial Discoveries*. Westport: Quorum Books.
- Fiske, S.T. & Taylor, S.E. (1991). *Social Cognition*, 2nd edition. New York: McGraw-Hill.
- Foss, N.J. & Pedersen, T. (2014). Microfoundations in strategy research. *Strategic Management Journal*, doi: 10.1002/smj.2362
- Garud, R., Gehman, J., & Giuliani, A. P. (2018). Serendipity arrangements for exapting science-based innovations. *Academy of Management Perspectives*, 32(1), 125-140.
- Glaser, B. G. (1965). The constant comparative method of qualitative analysis. *Social problems*, 12(4), 436-445.
- Goulding, C. (2002). *Grounded Theory: A Practical Guide for Management, Business and Market Researchers*. Thousand Oaks: Sage Publications

- Grégoire, D. A., Barr, P. S. & Shepherd, D. A. (2010). Cognitive processes of opportunity recognition: the role of structural alignment. *Organization Science*, 21, 413–431.
- Helfat, C. E., & Peteraf, M. A. (2015). Managerial cognitive capabilities and the microfoundations of dynamic capabilities. *Strategic Management Journal*, 36(6), 831–850.
- Hohenthal, J., Johanson, J. & Johanson, M. (2003). Market discovery and the international expansion of the firm. *International Business Review*, 12, 659–672.
- Huff, A.S. (1990). *Mapping strategic thought*. New York: John Wiley and Sons.
- Johanson, J., & Vahlne, J. E. (1977). The internationalization process of the firm—a model of knowledge development and increasing foreign market commitments. *Journal of international business studies*, 8(1), 23–32.
- Johanson, J., & Vahlne, J. E. (2003). Business relationship learning and commitment in the internationalization process. *Journal of international entrepreneurship*, 1(1), 83–101.
- Kalinic, I., Sarasvathy, S. D., & Forza, C. (2014). ‘Expect the unexpected’: Implications of effectual logic on the internationalization process. *International Business Review*, 23(3), 635–647.
- Kantorovich, A. & Ne'eman, Y. (1989). Serendipity as a source of evolutionary progress in science. *Studies in History and Philosophy of Science Part A*, 20, 505–529.
- Kiesler, S. & Sproull, L. (1982). Managerial response to changing environments: perspectives on problem sensing from social cognition. *Administrative Science Quarterly*, 27, 548–570.
- Kirzner, I.M. (1973). *Competition and Entrepreneurship*. Chicago: University of Chicago Press.
- Kirzner, I.M. (1997). Entrepreneurial discovery and the competitive market process: an Austrian approach. *Journal of Economic Literature*, 35, 60–85.
- Kiss, A. N. & Barr, P. S. (2015). New venture strategic adaptation: the interplay of belief structures and industry context. *Strategic Management Journal*, 36, 1245–1263.
- Kiss, A. N., Danis, W. M. & Cavusgil, S. T. (2012). International entrepreneurship research in emerging economies: a critical review and research agenda. *Journal of Business Venturing*, 27, 266–290.
- Kiss, A. N., Williams, D. W. & Houghton, S. M. (2013). Risk bias and the link between motivation and new venture post-entry international growth. *International Business Review*, 22, 1068–1078.
- Krefting, L. (1991). Rigor in qualitative research: the assessment of trustworthiness. *American Journal of Occupational Therapy*, 45, 214–222.
- Kuemmerle, W. (2005). The entrepreneur’s path to global expansion. *Sloan Management Review*, 46, 411–432.
- Lee, T.W. 1999. *Using Qualitative Methods to Organize Research*. Newbury Park: Sage.
- Lincoln, Y. S. & Guba, E.G. (1985). *Naturalistic Inquiry*. New York: Sage Publications.
- Lindsay, G. (2013). Engineering serendipity. *The New York Times*. 7 July.
- Mainela, T., Puhakka, V. & Servais, P. (2014). The concept of international opportunity in international entrepreneurship: a review and a research agenda. *International Journal of Management Reviews*, 16, 105–129.
- Maitland, E., & Sammartino, A. (2015). Managerial cognition and internationalization. *Journal of International Business Studies*, 46, 733–760.
- Mathews, J. A., & Zander, I. (2007). The international entrepreneurial dynamics of accelerated internationalisation. *Journal of international business studies*, 38(3), 387–403.

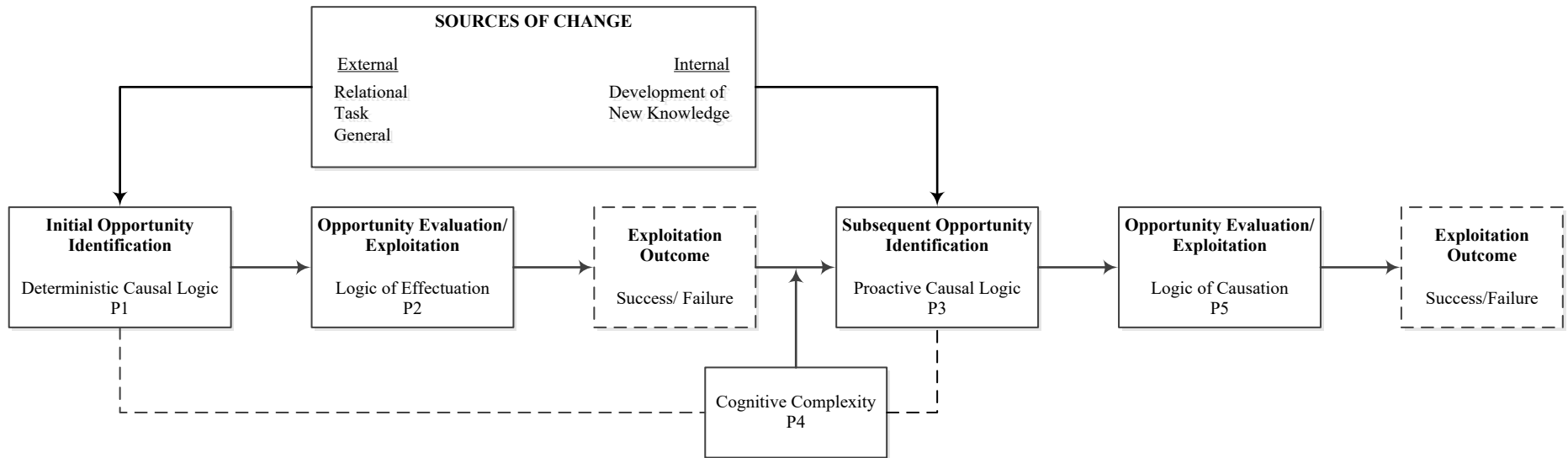
- McDougall, P. & Oviatt, B. (2000). International entrepreneurship: the intersection of two research paths. *Academy of Management Journal*, 43, 902-908.
- McKenny, A. F., Aguinis, H., Short, J. C., & Anglin, A. H. (2016). What doesn't get measured does exist: Improving the accuracy of computer-aided text analysis. *Journal of Management*, DOI: 10.1177/0149206316657594.
- McMullen, J.S. & Shepherd, D.A. (2006). Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur. *Academy of Management Review*, 31, 132-152.
- Merrilees, B., Miller, D. & Tiessen, J. (1998). Serendipity, leverage, and the process of entrepreneurial internationalization. *Small Enterprise Research*, 6, 3-11.
- Meyer, K. & Skak, A. (2002). Networks, serendipity and SME entry into Eastern Europe. *European Management Journal*, 20, 179-188.
- Miles, M. B. & Huberman, A. M. (1994). *Qualitative Data Analysis: An Expanded Sourcebook*, 2<sup>nd</sup> edition. Thousand Oaks: Sage Publications.
- Muzychenko, O., & Liesch, P. W. (2015). International opportunity identification in the internationalisation of the firm. *Journal of World Business*, 50, 704-717.
- Nadkarni, S. & Narayanan, V. K. (2007). Strategic schemas, strategic flexibility, and firm performance: the moderating role of industry clockspeed. *Strategic Management Journal*, 28, 243-270.
- Nadkarni, S. & Barr, P. S. (2008). Environmental context, managerial cognition, and strategic action: an integrated view. *Strategic Management Journal*, 29, 1395-1427.
- Nadkarni, S. Herrmann, P. & Perez, P. D. (2011). Domestic mindsets and early international performance: the moderating effect of global industry conditions. *Strategic Management Journal*, 32, 510-531.
- Nelson, K.M., Nadkarni, S., Narayanan, V. and Ghods, M. (2000). Understanding software operations support expertise: a revealed causal mapping approach. *MIS Quarterly*, 24, 475-07.
- Oviatt, B. M. & McDougall, P. P. (1994). Toward a theory of international new ventures. *Journal of International Business Studies*, 25, 45-64.
- Oviatt, B. M. & McDougall, P. P. (2005). Defining international entrepreneurship and modeling the speed of internationalization. *Entrepreneurship: Theory and Practice*, 29, 537-553.
- Perakyla, A. & Ruusuvuori, J. (2011). Analyzing talk and text. In Denzin, N. and Lincoln, Y. (Eds.), *The SAGE Handbook of Qualitative Research*. Thousand Oaks: Sage Publications, 529-44.
- Pettigrew, A.M., Woodman, R.W. & Cammuzyeron, K.S. (2001). Studying organizational change and development: challenges for future research. *Academy of Management Journal*, 44, 697-713.
- Prashantham, S. & Floyd, S. W. (2012). Routine microprocesses and capability learning in international new ventures. *Journal of International Business Studies*, 43, 544-562.
- Reuber, A. R., Knight, G. A., Liesch, P. W., & Zhou, L. (2018). International entrepreneurship: The pursuit of entrepreneurial opportunities across national borders. *Journal of International Business Studies*, 49, 395-406.
- Root, F.R. (1977). *Entry Strategies for Foreign Markets: From Domestic to International Business*. Academy of Management Briefing (AMACON).
- Root, F.R. (1994). *Entry Strategies for International Markets*. San Francisco, CA: Joseey-Bass.

- Sarasvathy, S. D. (2001). Causation and effectuation: toward a theoretical shift from economic inevitability to entrepreneurial contingency. *Academy of Management Review*, 26, 243–263.
- Sarasvathy, S. (2007). *Effectuation: The Logic of Entrepreneurial Expertise*. Northampton: Edward Elgar Publishing.
- Sarasvathy, S.D. (2014). The whole deal: models, metaphors and mechanisms in entrepreneurial cognition. In J.R. Mitchell, R.K. Mitchell and B. Randolph-Seng (Eds.), *Handbook of entrepreneurial cognition* (pp. 448–70). Northampton, MA: Edward Elgar Publishing.
- Sarasvathy, S. D., Kumar, K., York, J. G. & Bhagavatula, S. (2013). An effectual approach to international entrepreneurship: overlaps, challenges, and provocative possibilities. *Entrepreneurship Theory and Practice*, 38, 71–93.
- Scott, W. A. (1962). Cognitive complexity and cognitive flexibility. *Sociometry*, 25, 405–414.
- Shah, S. K. & Corley, K. G. (2006). Building better theory by bridging the quantitative–qualitative divide. *Journal of Management Studies*, 43, 1821–1835.
- Shane, S. (2000). Prior knowledge and the discovery of entrepreneurial opportunities. *Organization Science*, 11, 448–469.
- Shane, S. (2012). Reflections on the 2010 AMR decade award: delivering on the promise of entrepreneurship as a field of research. *Academy of Management Review*, 37, 10–20.
- Shane, S. & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25, 217–226.
- Sharma, D. D., & Blomstermo, A. (2003). The internationalization process of born globals: a network view. *International business review*, 12(6), 739-753.
- Shepherd, D.A., McMullen, J.S. & Jennings, P.D. (2007). The formation of opportunity beliefs: overcoming ignorance and reducing doubt. *Strategic Entrepreneurship Journal*, 1, 75–95.
- Short, J. C., McKenny, A. F., & Reid, S. W. (2018). More than words? Computer-aided text analysis in organizational behavior and psychology research. *Annual Review of Organizational Psychology and Organizational Behavior*, 5, 415-435.
- Stigler, G.J. (1961). The economics of information. *Journal of Political Economy*, 69, 213–225.
- Styles, E. (2006). *The Psychology of Attention*. East Sussex, UK: Psychology Press.
- Suddaby, R. (2006). From the editors: what grounded theory is not. *Academy of Management Journal*, 49, 633–642.
- Suddaby, R., Bruton, G. D. & Si, S. X. (2015). Entrepreneurship through a qualitative lens: insights on the construction and/or discovery of entrepreneurial opportunity. *Journal of Business Venturing*, 30, 1-10.
- Sundaramurthy, C., Zheng, C., Musteen, M., Francis, J., & Rhyne, L. (2016). Doing more with less, systematically? Bricolage and engineering in successful social ventures. *Journal of World Business*, 51, 855-870.
- Weick, K. (1979). *The Social Psychology of Organizing*, 2<sup>nd</sup> ed. New York: Random House
- Westhead, P., Ucbasaran, D. & Wright, M. (2005). Decisions, actions, and performance: Do novice, serial, and portfolio entrepreneurs differ? *Journal of Small Business Management*, 43, 393–417.
- Wood, M.S. & Williams, D.W. (2014). Opportunity evaluation as rule-based decision making. *Journal of Management Studies*, 51, 573–602.
- Wood, M.S., Williams, D.W. & Grégoire, D.A. (2012). The road to riches? A model of the cognitive processes and inflection points underpinning entrepreneurial action'. In A.



- Corbett and J. Katz (Eds.), *Entrepreneurial Action: Advances in Entrepreneurship, Firm Emergence and Growth* (pp. 207–252). Bingley: Emerald Group Publishing.
- Young, S., Hamill, J., Wheeler, C. & Davies, J. R. (1989). *International Market Entry and Development: Strategies and Management*. Hemel Hempstead: Harvester Wheatsheaf.
- Zahra, S. A. (2005). A theory of international new ventures: a decade of research. *Journal of International Business Studies*, 36, 20–28.
- Zahra, S. A., Korri, J. S., & Yu, J. (2005). Cognition and international entrepreneurship: implications for research on international opportunity recognition and exploitation. *International business review*, 14(2), 129-146.

**Figure 1**  
**An opportunity recognition cognitive process perspective on serendipitous FMEs**



**Table 1**  
**Case profiles and pattern of FME**

Name *	Founded	Prior international Experience (Living and/or working abroad)	Prior start-up experience	Prior Relevant Industry Experience	Current Number of Employees	International Sales	Foreign Market Entry Sequence (Year, Country [S or P]) **	Initial Foreign Market Entry Mode
<b>B_Sport</b>	1993	Y	N	Y	304	94%	2002 (Austria [S], Germany [S], Italy [S], France [S])	Export
<b>B_Pack</b>	1991	Y	N	N	200	45%	1998 (Serbia [S]); 1999 (Macedonia [P], Albania [P]); 2002 (Germany [P], Romania [P]); 2004 (Poland [P]); 2007-2008 (Hungary [P], Slovenia [P], Slovakia [P])	Export
<b>I_Acad</b>	2012	N	N	Y	22	100%	2012 (USA [S], Australia [P], Singapore [P], France [P]); 2013 (UK [P], Canada [P], Germany [P], South Africa [P])	Export
<b>I_Appliance</b>	1989	Y	N	Y	500	15%	1995 (Sweden [S]); 1996-1998 (all in the following 3 years - Estonia [S], Holland [S], UK [S], Belgium [S], Iceland [S], Portugal [S], China [S], Thailand [S], Srilanka [S], Nepal [S], Bangladesh [S], Bhutan [S], Philippines [S], Maldives [S], Kenya [S], South Africa [S], Tanzania [S], Madagascar [S], Senegal [S], Burkina Faso [S], Chad [S], Dubai [S], Yemen [S], Bahrain [S], Libya [S], Saudi Arabia [S], Kuwait [S], Oman [S], Australia [S], New Zealand [S] 2008 (Libya [P], Bahrain [P], Kuwait [P], Kenya [P]) 2009 (Saudi Arabia [P], Yemen [P])	Export
<b>R_Steel</b>	2005	Y	N	Y	57	60%	2005 (France [S]); 2009 (Germany [S], Austria [S]); 2010 (Serbia [S], Czech [S], Belarus [S]); 2011 (Sweden [S], Denmark [S]), 2012 (USA [S]) 2013 (France [P])	Export
<b>R_Furniture</b>	2003	Y	Y	Y	12	10%	2003 (Germany [S]); 2005 (Netherlands[S]; Belgium [S], France [S], 2006 (Moldavia), 2009( UK [S]), 2012 (Croatia [S]), 2013 (Switzerland [S], Norway[S])	Export

Notes: \* Nomenclature of firm name is in the following format: First initial of firm home country\_firm industry. Thus **B\_Sport** denotes a Bulgarian firm in the sporting goods industry, **I\_Appliance** denotes an Indian firm in the appliances industry, **R\_Steel** denotes a Romanian firm in the steel industry, etc.

**Table 2**  
**Causal logic change in revealed partial causal maps and level of complexity in revealed full causal maps**

	R_Steel	R_Furniture	B_Pack	B_Sport	I_Acad	I_Appliance
<b>Initial IOR*</b> Deterministic (environment→ action link)	3	4	3	3	6	4
Proactive (action → environment link)	1	0	1	0	0	0
<b>Subsequent IOR</b> Deterministic (environment→ action link)	2	9	2	4	2	3
Proactive (action → environment link)	4	2	3	1	3	4
Number of years until initial switch from deterministic to proactive	9	no switch	1	no switch	2	10
Cognitive complexity **	1.62	1.35	1.5	1	1.72	1.44

**Notes:**

\* IOR is an acronym for International Opportunity Recognition

\*\* Complexity is computed by dividing the total number of links between full causal map concepts by the total number of full causal map concepts (a higher value indicates higher cognitive complexity); following Calori et al., 1994 resulting values were adjusted by interview length (number of words).

**Table 3**  
**Illustrative quotations for effectuation logic**

<b>Effectuation principle</b>	<b>Source (case)</b>	<b>Illustrative Quotation</b>
Lemonade and pilot-in-the-plane	B_Pack	<i>Until this so-called global crisis came, the Bulgarian market was probably near 80%. The crisis forced us, thank God, to look for new markets and countries'... 'And we had the necessary equipment and capabilities to do it.'... 'because it is not easy.' The equipment is expensive. Our last investment was nearly 15 million BGN. So, to start doing this during times of a crisis is just absurd.</i>
	R_Furniture	<i>It was an opportunity, and generally very much I... at least the decisions I made or the decisions about what happened with R- Furniture, because I made decisions as I went on, they were made, let's say, as opportunities showed up. Because we were at such small level, you couldn't, how should I say, you couldn't make decisions so that you can say that in a year I'll do this. I mean it was very little predictability for what would come next. Especially the way the market was...</i>
	I_Appliance	<i>Living in a time of shortages... if I had to now say that, okay, then what made us capable of selling these products in the export or international markets, it took us a long time...First 1 ½, 2 years, the products were coming out of Sweden. In Sweden they were making them for 25- 30 years. And their equipment was different. Their quality was different. There were many aspects – material was different. You know, you didn't get all those grades of material in India. So there was an issue. It took us about 1 ½, - 2 years to actually get the whole thing right.</i>
	B_Sport	<i>The organization of export activities, given new EU standards...had to happen and it didn't matter for us what we had to do.</i>
Affordable loss	B_Pack	<i>We focused on these countries because they are close to us, shipping costs are negligible, there is no language barrier, no need for a qualified management team that offers production.</i>
	R_Furniture	<i>We have work, give me, let's go, let's move forward we'll see how it goes... Anyway it was that period from 2005 until 2009, until 2008 actually, when our turn over doubled every year. And you didn't really worry.</i>
Crazy quilt	R_Furniture	<i>The partner in the Netherlands who helped me start the business went bankrupt in a very beautiful way. I lost about 30-40,000 euros following... and I haven't recovered them. In that moment I put in, let's say I activated all my ties and connections whatever else I had, so that I'd find other clients.</i>
	I-Acad	<i>The initial part of building our sales... was done primarily through the alumni networks...because these groups and networks of college of the university help you reach out much easier.</i>

**Table 4**  
**Illustrative quotations for causation logic**

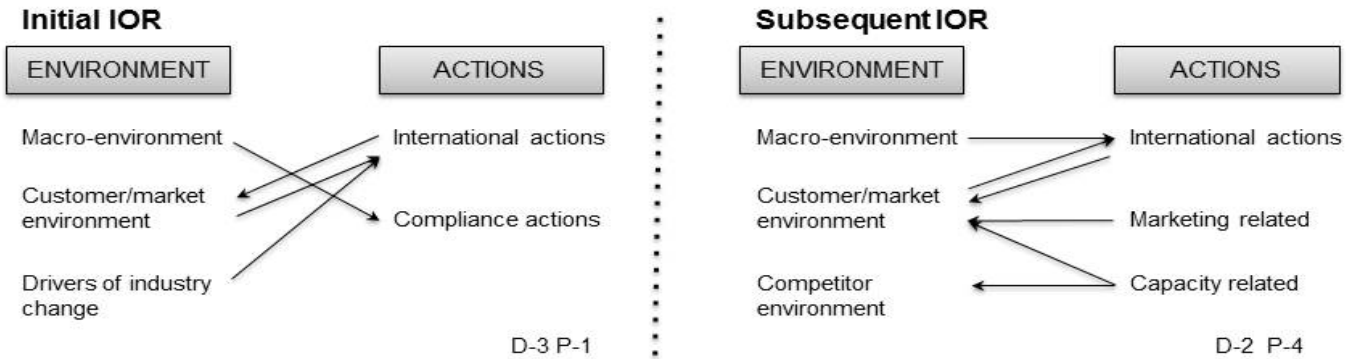
<b>Source (case)</b>	<b>Illustrative Quotation</b>
B-Pack	<p><i>This is a non-stop production, energy-intensive production, with many people, constant break-downs the providers of the machinery are Western companies...we must always keep some stock of spare parts.</i></p> <p><i>We have signed the contract, we have paid... on the fifth of July, the machines will be delivered and afterwards, we will be waiting for our money to be refunded...the project we got involved with is a bit more serious. With it, we will expand the range of products that we offer, through the program "Competitiveness". The project is for about 3 million and 300-400 thousand Levs. If we manage, through the European funds, we will receive a 2 million Lev refund, which is serious.</i></p>
R-Steel	<p><i>We have increased the number of clients from France and our online presence. Translating our website in 4 languages, investing in a search optimizer, and improving its layout are the best marketing strategies we've recently implemented.</i></p> <p><i>We installed a siren that goes off at 7 AM, 11 AM, 11:30 AM, and 4 PM and 15 surveillance cameras. Things couldn't go better. We've grown from 57 to 64 employees and productivity has dramatically improved. We have a high retention rate, a 3-month trial period, and people are happy to work here.</i></p>
I-Appliance	<p><i>So the first thing which we are doing is to upgrade our facilities here, which would appeal to the European customer in terms of how we have it...We are investing in the European market...we developed the 0.34 l bottles to appeal to them.</i></p> <p><i>I see the cylinder business going up. But at some stage, I see the Saudi and Yemen business probably coming down soon. That is the reason why we are trying to move it ...towards some of these European countries.</i></p> <p><i>So my price in the spectrum of whether I price it high or low, I'm going to sell those 15,000, 20,000 cylinders. So I price it in such a way that I decide what kind of margin I need...but the bottom line is we need to bring down our promotion costs to a more reasonable level.</i></p>
I-Acad	<p><i>The only logical way that we thought about was that we go by the research grants and endowments that each of these business schools would have. And that would define the capitalization for us in terms of what we can cater to. And if you look at the Financial Times top 100 lists, I think 85 or 87 of them lie in the markets that we are operating.</i></p> <p><i>I think the market is still pretty big for us to grow in that direction and we would increase the workforce further.</i></p> <p><i>The government gives you help in the sense that, if you are in a regular business otherwise, you have to pay service tax on the income that you are generating. Whatever the foreign earning you are generating, you don't have to pay a service tax on that. So from a taxation purpose that definitely helps...when internationalizing.</i></p>

APPENDIX A

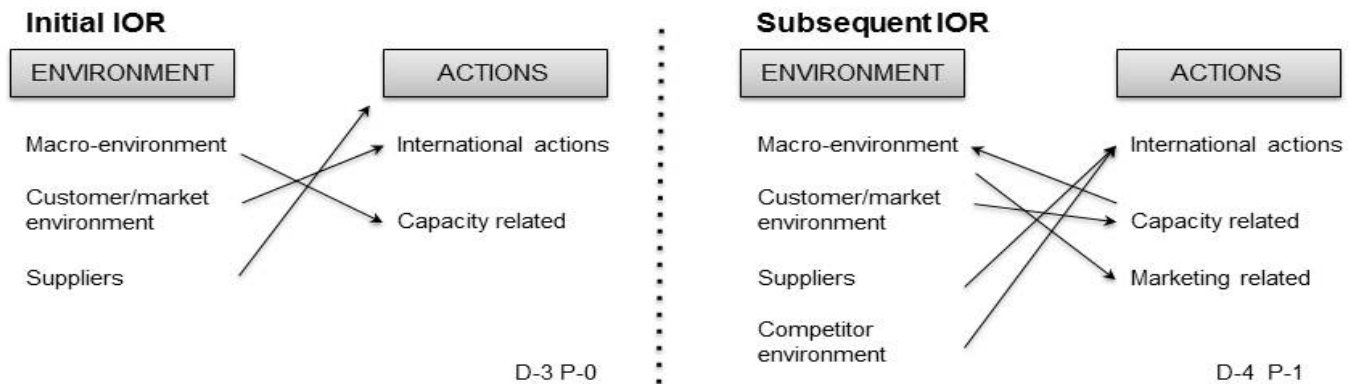
Figure A.1

Partial causal maps that illustrate deterministic and proactive causal logics employed at the opportunity identification stage (D-Deterministic Links; P-Proactive Links)

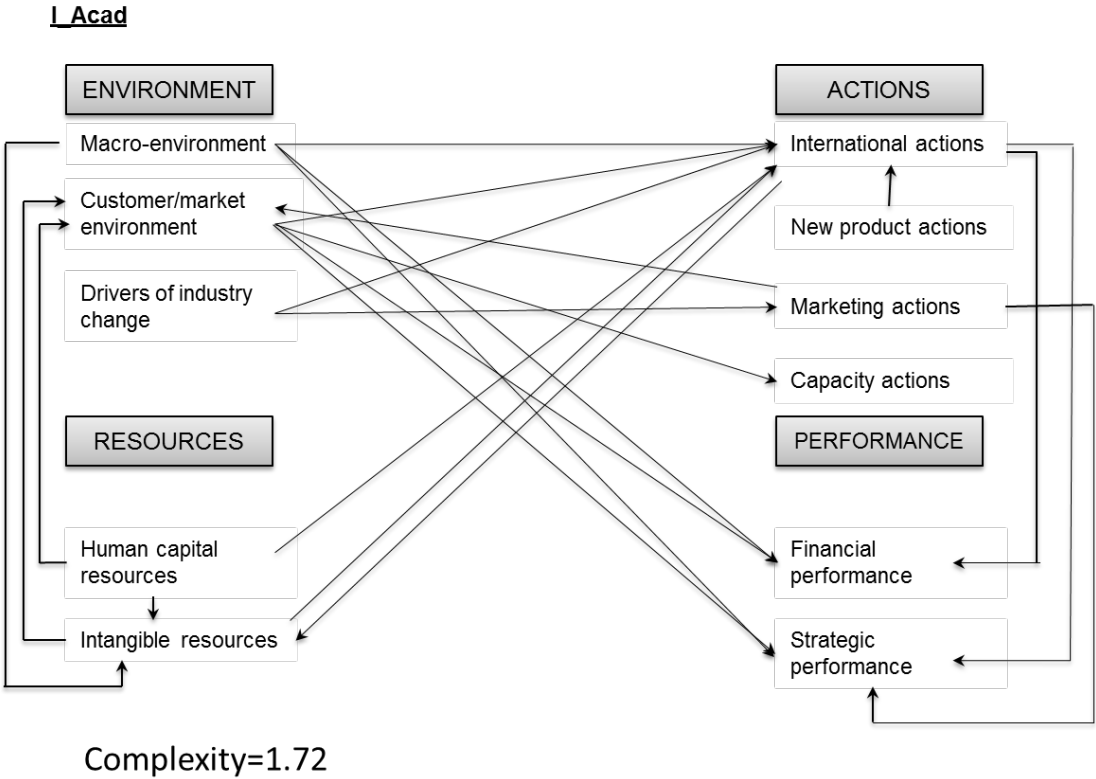
**R-Steel revealed partial causal maps**



**B-Sport revealed partial causal maps**



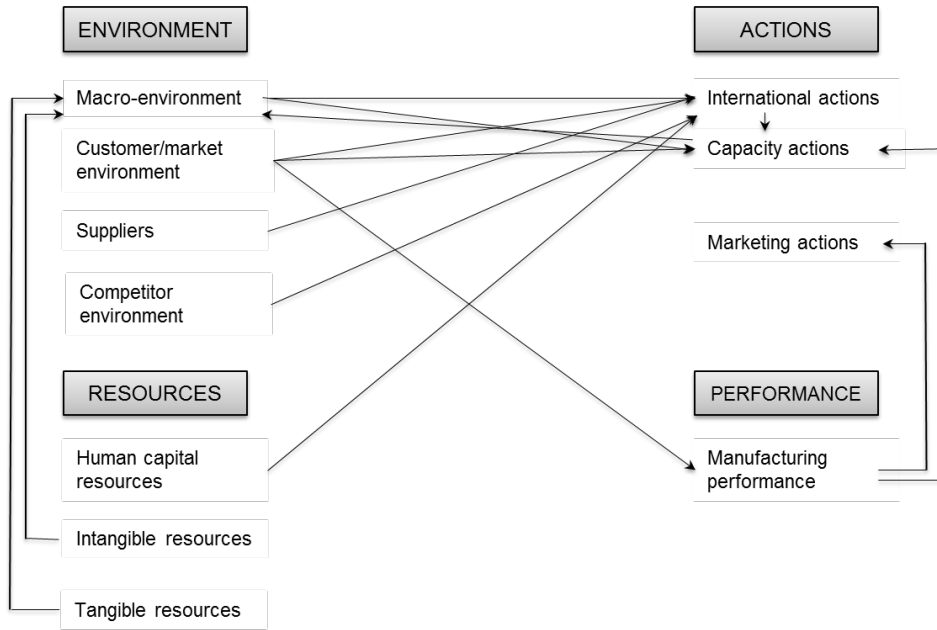
**Figure A.2**  
**Full causal map for I\_Acad**





**Figure A.3**  
**Full causal map for B\_Sport**

**B\_Sport**



Complexity=1