

## **Configurations of Capacity for Change in Entrepreneurial Threshold Firms: Imprinting and Strategic Choice Perspectives**

**ABSTRACT** Imprinting theory suggests that founding conditions are ‘stamped’ on organizations, and these imprinted routines often resist change. In contrast, strategic choice theory suggests that the firm can overcome organizational inertia and deliberately choose its future. Both theories offer dramatically different explanations behind an organization’s capacity for change. IPO firms provide a unique context for exploring how imprinting forces interact with strategic choice factors to address organizational capacity for change as a firm moves from private to public firm status. Juxtaposing imprinting and strategic choice perspectives, we employ fuzzy set to examine the multi-level determinants of organizational capacity for change. Our cross-national data reveals three effective configurations of organizational capacity for change within IPOs, and two ineffective configurations. Our results suggest that the antecedents of organizational capacity for change in entrepreneurial threshold firms are nonlinear, interdependent, and equifinal.

**Word Count:** 138 (< 150)

**Keywords:** imprinting theory, strategic choice theory, organizational capacity for change, fuzzy set analysis, IPO firms

## **INTRODUCTION**

The initial public offering (IPO) is regarded as a milestone event in the organizational life cycle of entrepreneurial firms (Filatotchev and Piesse, 2009). It represents a ‘strategic threshold’ as privately-held firms enter public equity markets for the first time and the entire firm experiences a significant transformation in organization-wide routines and capabilities (Zahra and Filatotchev, 2004). Privately-held firms make this transition to gain access to new financial resources to invest in their own operations, accelerate the development of innovative technologies, enter new markets and/or acquire other firms (Kim and Weisbach, 2008).

Leading up to and in the aftermath of an IPO, firms encounter many new challenges and must adapt many operating routines and procedures. For example, the board of directors often gains heightened scrutiny by potential investors as the firm prepares to enter public markets (Pollock and Rindova, 2003). Additionally, the extent and frequency of information disclosures increases significantly, which gives competitors more knowledge of firm activities (Guo et al., 2004). Typically, the ownership structure shifts considerably in the aftermath of entering public equity markets, which alters the balance of power within the firm (Howton et al., 2001). Furthermore, the firm typically grows rapidly after gaining access to new financial resources (Kim and Weisbach, 2008). As such, the capacity for change is essentially important when the firm enters and moves through this milestone event.

Some IPO firms are able to make this transition into the public equity markets relatively smoothly, while others fail to do so and ultimately do not survive (Demers and Joos, 2007; Fischer and Pollock, 2004). Unfortunately, we know relatively little about the conditions that facilitate the capacity to change needed by firms to successfully navigate the IPO event. There are several reasons for this. First, existing knowledge predominantly comes from a highly-

specific economic context, the United States. This is despite the fact that the US IPO market is either stagnant or in relative decline while IPO markets elsewhere are flourishing (Doidge et al., 2013). This single-country research emphasis means that existing findings may be limited to the US IPO market, and cannot be generalized to other national IPO markets.

Second, the IPO literature has largely focused on observable shifts in organizational structures (i.e., board of director composition, ownership, or organizational size) while inferring adaptation capabilities from financial performance metrics. This approach largely ignores actual organizational capabilities associated with firm adaptation. Because this structural research has failed to explain much variance in post-IPO outcomes (Lubatkin et al., 2007; Ritter, 2003) and because the essence of entrepreneurial leadership is change (Chakravarthy and Lorange, 2008), a more direct examination of actual change capabilities in entrepreneurial firms is required.

Finally, the predominant analytical approach for understanding IPO processes and outcomes has been the variance approach: large-N studies using various forms of regression analysis. However, this approach has increasingly come into question within the organizational sciences (Fiss, 2011), as well as for entrepreneurial firms (Lubatkin et al., 2007). The variance approach has been shown to be especially problematic due to its assumptions of unifinality (one set of factors explains all outcomes), of independence between predictors (nonexistent or limited interactions among explanatory variables), and of symmetry of causal connections (both success and failure are explained by the same factors) (Fiss, 2007; Ragin, 2008).

In light of these shortcomings, this study takes a different theoretical and analytical approach for explaining firm adaptability in response to the IPO event. Specifically, we address these gaps by: (1) studying IPOs in a cross-national sample of developed and developing economies; (2) examining well established theory-based predictors of IPO organizational capacity for change

operating at five different levels of analysis; and (3) using fuzzy set analysis so that the interdependence between our multi-level predictors can be explicitly considered and modeled (Ragin, 2008).

Juxtaposing imprinting and strategic choice perspectives, we aim to make the following theoretical contributions. First, we refine and extend the debate between environmental determinism and strategic choice (see Bourgeois, 1984; Hrebiniak and Joyce, 1985). Specifically, this study examines the empirical interactions between both imprinting and strategic choice conditions to better understand the critical interactive nature of organization-environment relationships in the adaption process (Hrebiniak and Joyce, 1985). In so doing, we expand our understanding of the factors that facilitate or inhibit the organizational capacity for change.

Second, theorizing across multi-level constructs is considered a significant development to extant research of environmental determinism and strategic choice (Klein et al., 1994; De Rond and Thietart, 2007). Addressing this call for deeper understanding of ‘complex holism’ (Fan, 2007), we develop predictors operating at five different levels of analysis to better understand the embedded and interactive nature of organizational adaptation within an entrepreneurial context. Further, because the IPO event is a unique window into the life of the firm in terms of organizational change, it represents an ideal research setting for exploring these issues.

Our third theoretical contribution is to empirically demonstrate that there are multiple paths for preparing the entrepreneurial firm for a major change in its organizational life. Relatedly, we help explain why previous literature has demonstrated conflicting results with respect to founder CEOs and post-IPO outcomes. For example, our data reveal that in some configurations, founder CEOs retard an organization’s capacity for change while in other configurations they facilitate it. Furthermore, the level of trust within the top management team is one of the most important

determinants of capacity for change, regardless of the other multi-level factors. As such, we demonstrate how imprinting and strategic choice conditions interact to affect organizational capacity for change in entrepreneurial threshold firms from a cross-national perspective.

## **THEORETICAL DEVELOPMENT**

Scholars have long recognized that a firms' survival and success depends on both environmental forces and strategic choice factors (Child, 1972; Hrebiniak and Joyce, 1985; Stinchcombe, 1965). In particular, organizations often experience difficulty adapting to changes in environment (Hannan and Freeman, 1977; Hannan and Freeman, 1984). A consistent theme in this research is that firms are subject to a process of organizational imprinting during their founding period in the sense that the organizational structure tends to reflect powerful elements of the environment where it was founded (Hannan and Freeman, 1984; Marquis, 2003; Dobrev and Gotsopoulos, 2010). These organizational imprints persist beyond the initial founding stage even in the face of subsequent environmental changes (Stinchcombe, 1965; Boeker, 1989), affecting the capability to adapt a firm's strategy, structure and procedures and, subsequently, its likelihood of surviving and excelling in long term.

In a comprehensive review of the literature, Marquis and Tilcsik (2013, p. 199) described three essential features of organizational imprinting: '(1) the existence of a temporally restricted *sensitive period* characterized by high susceptibility to environmental influence; (2) the powerful impact of the environment during the sensitive period such that focus entity comes to *reflect elements of the environment* at that time; and (3) the *persistence* of the characteristics developed during the sensitive period even in the face of subsequent environmental changes'.

The initial founding period has gained the most attention in theory and research on organizational imprinting (Stinchcombe, 1965; Boeker, 1989). However, Marquis and Tilcsik

(2013) suggest there might be multiple sensitive periods in the life of an organization. Specific to this particular study, they emphasize that ‘the listing on a public stock exchange represents a new potential sensitive period where organizations may break out of their inertial path as the uncertainty of such dramatic transitions create new environmental demands’ (Marquis and Tilcsik, 2013, p. 208).

Of course, not all IPO firms passively drift along a trajectory set by its initial imprinting forces and conditions – firms are also able to learn and adapt to situations. The strategic choice perspective (Child, 1972) argues that some firms are endowed with capable strategic leaders who can select a new strategic direction for the firm and then lead it in that direction. Thus, when the organization enters the public equity market for the first time, this event may represent the first major challenge to the firm’s strategic leaders as it addresses its initial imprinting conditions. Indeed, Greiner (1972) identified the strategic transition from founding entrepreneur(s) to professional manager(s) as one of the first and biggest challenge to all new firms. Since many aspects of the IPO event require professional management skill, these firms represent a valuable and interesting context for assessing the combined forces of imprinting and strategic choice factors on organizational adaptation.

### **Organizational Capacity for Change**

Organizations must reactively or proactively address environmental conditions to survive and prosper. Because the environment is changing quickly in often unpredictable directions, change initiatives are increasingly common in many organizations today (Lawler and Worley, 2006). Unfortunately, many change initiatives are not successful. One commonly-cited statistic suggests that 70 percent of deliberate change initiatives pursued fail to reach their objectives

(Beer and Nohria, 2000). In sum, previous research has demonstrated that there is considerable variation in many organizations' capacity for change (Judge, 2011).

Organizational capacity for change is conceptualized as 'a dynamic, multidimensional capability that enables an organization to upgrade or revise existing organizational competencies, while cultivating new competencies that enable the organization to survive and prosper' (Judge, 2011, p. 14). While this dynamic capability is critical for all firms at some point in their evolution, it is essential in the aftermath of the IPO event. A firm's organizational capacity for change has been shown to be associated with higher levels of firm performance in Bulgaria (Judge and Elenkov, 2005), Russia (Judge et al., 2009), and the US (Judge, 2011), but relatively little is known about its antecedent conditions. Consequently, our intention in this study is to learn what the set of causal conditions that collectively influence the organizational capacity for change might be for IPO firms located in a wide range of economies.

Due to the relatively newness of this construct, only limited anecdotal case studies are available to shed light on its nature, and comprehensive, systematic studies in cross-national settings that indicate what the specific antecedents of organizational capacity for change might be are still missing. However, recent research clearly demonstrates that multi-level predictors explain adaptive capabilities within organizations, which in turn influence subsequent performance outcomes (Lu et al., 2010). Therefore, we focus on two well-established, but competing, theoretical perspectives that identify antecedents on various levels of analysis to describe and explain why firms adapt and evolve over time. Our expectation is that these contrasting literatures, paired with a configurational approach that takes into account the possibility that combinations of different sets of variables may produce similar outcomes, will parsimoniously but comprehensively account for the multiple levels of influence on

organizational capacity for change. The two perspectives are the imprinting (Stinchcombe, 1965) and the strategic choice frameworks (Child, 1972).

### **Imprinting Perspective and Organizational Capacity for Change**

Imprinting is a process where a focal entity develops characteristics that reflect prominent features of the environment during a brief period of susceptibility (Marquis and Tilcsik, 2013, p. 199). As these characteristics persist, imprinting can have strong influences on firms that last well beyond their founding stage, and often constraining the firm's capacity to change in subsequent periods (Baron et al., 1999; Carroll and Hannan, 2004). The imprinting framework developed by Marquis and Tilcsik (2013) highlights three different multi-level and equally important sources of imprints – economic and technological, institutional, and individual – that can have 'stamped' effects on firms when encountered at founding. Following this line of theoretical development, this study examines the founding conditions of these three key imprints that may retard or resist the organizational capacity for change in IPOs.

*Industry stage of development.* According to imprinting theory, economic and technological conditions at founding can have strong effects on the organization (Marquis and Tilcsik, 2013). For instance, when a firm is 'born', existing industry conditions exert important influences on the firms by shaping its organizational structure and processes, and continue to influence the firm's operating patterns thereafter. Supporting this view, Stinchcombe (1965) found that the socioeconomic characteristics of a given industry affect the organizational employment patterns of not only the existing firms, but also 'new' entrants to the industry.

Consistent with the imprinting perspective, we first focus on the industry's stage of development at founding to explain organizational capacity for change. Industry stage of development refers to the relative maturity of a given industry, which consists of three inter-



related dimensions – markets, technologies, and competitive structures (Tay and Low, 1994; Tay et al., 1992). The different industry stages of development reveal varying degrees of the competitive nature of the economic and technological conditions that can affect organizational behavior and success (Bourgeois, 1984; Dobrev and Gotsopoulos, 2010; Stinchcombe, 1965).

Following the imprinting logic, we argue that when a firm enters or creates a relatively new industry at its founding period, these industry conditions may affect that firm's capacity to change. Previous research suggests that when an industry is at an early stage of development, it presents an entrepreneurial environment with relatively low entry barriers and limited competition but high levels of growth, uncertainty, and frequently includes radical technological innovations (Agarwal et al., 2002; Tushman and Anderson, 1986). To survive in such an environment, newly-founded firms may become 'agents of change' (Agarwal et al., 2002, p. 972) because they are more aware of and sensitive to the dynamic nature of the industry, so they develop capabilities to cope with this fluid situation.

In contrast, firms founded in a relatively mature industry, which is characterized by more concentrated and powerful players in a relatively stable environment, often lock into dominant technological designs rather than engaging in radical innovations (Agarwal et al., 2002; Anderson and Tushman, 1990). At this stage, firms encounter greater inertia and subsequently focus more on cost-based competition (Anderson and Zeithaml, 1984) and incremental, process-driven technological improvements (Tushman and Anderson, 1986). Furthermore, Dobrev and Gotsopoulos (2010) suggest that firms founded in mature industries often operate with stronger and more defined legitimation norms, making them less focused on managing external expectations and more likely to adopt 'industry recipes' (Spender, 1989). Therefore, previous research suggests that the maturity of an industry that a firm encounters at founding should retard

the firm's change capacity. Since we do not know exactly how this causal condition interacts with the other causal conditions, we advance the following non-directional proposition:

*Proposition 1:* The stage of development in the industry when the firm was founded will be a salient condition influencing the capacity for change of an IPO firm.

*National uncertainty avoidance.* National culture is a second condition regarded as an important source of imprinting that reflects the institutional conditions of a society (Marquis and Tilcsik, 2013). Previous research has shown that national cultural norms have strong imprinting effects on a firm's ability to cope with change and, ultimately, its performance (Kogut, 1993; Kogut and Zander, 2000).

Cultural norms associated with uncertainty avoidance are arguably the most important aspects of national culture which may influence an organizations' ability to change (Hofstede, 1980). People in a society with a high level of uncertainty avoidance often tend to be more sensitive to risk, and stability and certainty tend to be highly valued (Geletkanycz, 1997; Hofstede, 1980); whereas people in a society with a low level of uncertainty avoidance are more tolerant of uncertainty and changeable environments (Hofstede, 1983).

Prior to, during and immediately after the IPO event, firms face many new challenges and opportunities, such as new governance structures, competition, and strategies. Clearly, this event will raise the overall level of uncertainty confronting the organization. Therefore, the national culture norms and routines created to deal with uncertainty may have an important influence on firms' capacity to change. For instance, in a society with relatively high uncertainty avoidance, firm decision-makers often receive more objections or resistance toward change, and thus the firms are less likely to engage in change (Crossland and Hambrick, 2011). Cross-country studies have indicated that reluctance to change is found in societies with relatively high uncertainty

avoidance (Harzing and Hofstede, 1996), and top managers are more likely to maintain the *status quo* in those societies (Geletkanycz, 1997). In contrast, when societies have relatively low uncertainty avoidance, firms tend to be more innovative (Shane, 1993) and willing to deviate from other firms (Schneider, 1985).

In sum, an IPO firm based within a nation with relatively high uncertainty avoidance norms may be less capable of adapting to new situations resulting from the IPO. However, the specific influence of national uncertainty influence may depend on other causal conditions.

*Proposition 2:* The national uncertainty avoidance norms prevailing within the society in which the IPO firm is founded will be a salient condition influencing the capacity for change of an IPO firm.

*Founder CEO presence.* Theory and research on imprinting has identified the critical role of individual founders in setting the initial structure, strategy and culture of an organization (Baron et al., 1999; Dobrev and Gotsopoulos, 2010). Marquis and Tilcsik (2013, p. 213) emphasize that ‘some of the most compelling evidence about imprinting concerns the lasting effects of individual founders on organizations’. Likewise, Kriauciunas and Shinkle (2008, p. 7) stress that ‘powerful founders are the source of the imprint and they continue to exert influence on the firm that traditionalizes the imprint’.

One of the most widely studied sources of influence on the capacity for change in entrepreneurial contexts is founders occupying CEO positions (Daily & Dalton, 1992). However, findings have been inconclusive. On the one hand, founder CEOs are often unwilling or unable to relinquish control over important decisions, and they seldom adapt to the changing needs of the firm (Ranft and O’Neill, 2001). Additionally, few individuals possess all the necessary skills

to grow a business from inception to public ownership, thus founder CEOs may not be prepared or able to meet new challenges firms are exposed to, such as the IPO event.

Conversely, empirical evidence suggests that founder CEOs may be valuable at the time of transition to public ownership because they exercise strong leadership in firm governance (He, 2008; Nelson, 2003). Fischer and Pollock (2004) found that the presence of a founder CEO during the IPO time helps firms to successfully transit from a private entity to a publicly-held company, enhancing the firm's chances of survival. Hence, while the persistent influence of the founder CEO on the firm after start-up is evident, the literature is unclear about how the presence of a founder CEO would specifically affect the capacity for change of an IPO firm.

*Proposition 3:* The presence of a founder CEO at the time of the IPO will be a salient condition influencing the capacity for change of an IPO firm.

### **Strategic Choice Perspective and Organizational Capacity for Change**

Strategic choice theory suggests that current executive leaders play a potentially critical role in influencing organizational outcomes and emphasize the role of leading groups with power to decide on courses of strategic action (Child, 1972; Judge and Zeithaml, 1992). Research within this tradition suggests that executives exert influence through their collective role in promoting internal and external change, thereby affecting the strategy, structure and performance of the organizations they manage (Hambrick and Mason, 1984; Quigley and Hambrick, 2012).

A key concept related to the strategic choice literature is managerial discretion, defined as the latitude of action that top managers have in making strategic choices (Hambrick and Finkelstein, 1987; Hambrick et al., 2009). The discretion held by executive leaders varies widely, however, depending on the context in which they operate (Hambrick et al., 2009; Crossland and

Hambrick, 2011). Following this line of theory, we examine two key determinants of managerial discretion that may influence the organizational capacity for change in IPOs.

*Organizational financial slack.* Organizational financial slack refers to the level of assets, such as cash on hand, available and easily deployable to an organization (Mousa et al., 2013). From a strategic choice perspective, organizational financial slack represents a facilitator of a firm's adaptive strategic behavior, as the amount of slack that a firm maintains opens up or constrains decision-making (Bourgeois, 1984). This causal link is supported in previous studies (Finkelstein and Hambrick, 1990; Quigley and Hambrick, 2012).

The direction of influence from slack resources on the capacity for change, however, remains equivocal in the literature. Slack resources allow for experimentation in the firm, which may act as a managerial incentive for risk taking, innovation and proactive strategic choices (Mousa and Reed, 2013; Singh, 1986). Following this line of reasoning, Mousa et al. (2013) argue that higher levels of slack provide top management teams (TMTs) with confidence and flexibility during the high uncertainty IPO period by easing capital restrictions and allowing for investments that take advantages of emerging opportunities resulting from the IPO process. Higher levels of slack resources may then provide IPOs with the required flexibility to adapt to and make necessary organizational changes (Mousa and Reed, 2013).

Conversely, higher levels of slack may provide a buffer against external influences, thus reducing the need for adaptive initiatives (Hambrick and D'Aveni, 1988). Executive leaders in firms with higher levels of slack resources may become complacent, inward looking, and risk averse, leading to minimal adaptive initiatives, while lower levels of slack may stimulate them to adopt and intensify activities aimed at change as a form of corrective action (Tushman and Romanelli, 1985). In sum, while the direction of influence may be unclear, it is reasonable to

argue that slack resources in firms at the time of the IPO event affect the capacity for change in these firms.

*Proposition 4:* Organizational financial slack will be a salient condition influencing the capacity for change of an IPO firm.

*TMT trust.* Another core tenet in strategic choice theory is the central role of the TMT and how well this group functions in providing strategic leadership for the firm (Hambrick et al., 2009). Evidence suggests that intragroup dynamics within the TMT are a key determinant of the latitude of managerial action in the firm. These dynamics reflect the capacity of the TMT to function effectively as a work group to properly interpret and choose the best possible course of action (Papadakis and Barwise, 2002; Pegels et al., 2000). This applies particularly to entrepreneurial contexts characterized by high levels of uncertainty and change (Talke et al., 2010).

According to Simons and Peterson (2000), intragroup trust is an important aspect of the interpretation process among group members, which will subsequently affect group behavior and cohesion. In a fast-changing environment, unity and high functioning within TMTs is likely to facilitate the ability of the organization to adapt and change (Kellermanns et al., 2005). This is because interpersonal trust enhances members' confidence in one another and their willingness to act on the basis of the actions and decisions of other TMT members (McAllister, 1995).

The importance of trust in strategic choice theory is consistent with wider research finding that trust is beneficial to organizations in general (Dirks and Ferrin, 2001) and to TMTs in particular (Simons and Peterson, 2000). For instance, trust within the TMT can enhance communication and knowledge sharing within the leadership group (MacCurtain et al., 2008; Talaulicar et al., 2005), improve firm innovation (Ruppel and Harrington, 2000), and increase the TMT's ability to reflect and adapt (MacCurtain et al., 2008). These findings suggest that the

level of trust operating within the TMT is positively related to the firm's capacity for change; however, its specific impact may depend on the presence or absence of other causal conditions.

*Proposition 5:* The trust norms operating within the top management team will be a salient condition influencing the capacity for change of an IPO firm.

## **DATA AND METHODS**

We examined five causal conditions, operating at different levels of analysis, with a sample of IPOs from 15 economies. We initially identified and collected archival data on a sample of domestic IPOs located in 18 countries, using the EurIPO database for 2006 to 2008. For the present study, we then randomly selected two or more IPOs within each country and collected in-depth primary data from at least five organizational members, including at least three TMT members, in each IPO. To ensure reliability, data were collected by local country experts who spoke the native language. While this approach was relatively labor-intensive, it enabled us to obtain data that are as accurate and complete as possible. These primary data were collected in 2010.

The lead researchers of this study developed a data collection template that was delivered to all participating country experts for both primary and secondary data collection. Where required, the data collection template was translated into the local language and back-translated by another organizational scholar to assess equivalence to the original survey instrument. Primary data were mainly obtained via telephone interviews, although several country experts conducted face-to-face visits and interviews.

The average response rate for all 18 economies was 34 percent, with a range from 0 percent to 83 percent. The three countries without responses (The Netherlands, Nigeria, Switzerland) were dropped from further analysis. The remaining sample used consisted of 35 IPOs in 15

economies, with an overall response rate within this sample of 41.7 percent. The economies represented in this sample account for almost sixty percent of global gross domestic product (GDP), and they represent both developing and developed economies. Table I contains our final sample of firms listed by economy.

[Insert Table I about here]

### **Dependent Variable**

*Organizational Capacity for Change* (OCC) can be conceptualized as a dynamic capability whereby the firm consistently demonstrates an ability to adapt to its environment in a constructive and timely way (Judge and Elenkov, 2005). OCC was measured with a 32-item, Likert-type scale developed, validated and utilized in prior research seeking to understand dynamic capabilities of organizations (Judge and Douglas, 2009).

For each IPO firm, OCC responses were collected from three different levels within the organizational hierarchy – TMT, middle management, and frontline employee, to capture the hierarchical nature of this construct. The overall OCC score was computed by calculating the average response supplied by the three (or more) organizational members across the 32 items, then using the mean value of these three average scores. Additional analyses showed that the 32 items loaded on one single factor. Coefficient alpha for this scale was 0.97.

### **Independent Variables**

*Industry stage of development.* Following Tay and Low (1994), we used an Industry Maturity Grid (IMG) to assess the relative stage of development of each industry at the time of founding of the 35 IPO firms. IMG scores were developed for each IPO based on an existing analytical framework with three dimensions—markets, technologies, and structures—across 17 characteristics of a given industry (Tay and Low, 1994, p. 27).



Using firms' IPO prospectus, industry reports, company websites, and other publicly available information, we assessed the stage of development of each of the three dimensions with a score of 1 or 0 at the time of the firm's founding through content analysis. The number 1 was assigned if the particular dimension of the industry demonstrated characteristics closer to the 'mature' stage, and a 0 was assigned if the dimension demonstrated characteristics closer to the 'developing' stage. This approach resulted in an aggregated industry maturity scale of 0-3, where 0 would be assigned to IPOs founded in the relatively nascent industries (e.g., 0+0+0), and 3 would be assigned to IPOs founded in the relatively mature industries (e.g., 1+1+1).

When coding, two scholars with expertise in content analyses collected and coded the data as follows. First, each coder received initial guidelines and the coding template for the IMG score. Next, the two coders independently coded the 35 IPO cases. An inter-coder reliability test using Krippendorff's alpha was performed with a result of 0.916, which is well above the usual threshold of 0.80 (Krippendorff, 2004). Finally, the two coders compared, recoded, and resolved any IMG score deviations between them, leading to the final set of IMG scores.

*National uncertainty avoidance.* We obtained the scores on uncertainty avoidance norms for each studied country from prior research (Hofstede et al., 2010; Taras et al., 2012). For our sample, these scores ranged from 8 to 86, where a low score of 8 (Singapore) indicates a country with a relatively low uncertainty avoidance culture and a high score such as 86 (Spain) indicates a country with a relatively high uncertainty avoidance culture.

*Founder CEO presence.* A binary variable is used to measure the presence of a CEO founder at the time of the IPO. Following Nelson (2003), the variable is coded 1 if the founder is CEO at time of IPO, and 0 otherwise. For our sample, ten of our 35 IPOs (28.6 percent) went into the IPO event with a founder CEO.

*Organizational financial slack.* Following Mousa et al. (2013), organizational financial slack was operationalized as a ratio by taking the difference between current assets (e.g., cash and cash equivalents, accounts receivable, inventory and marketable securities) and current liabilities (e.g., accounts payable and accrued expenses) of the IPO firm, divided by its current assets for the year in which the firm went IPO. Also referred to as 'working capital', this measure is an often-used operationalization of organizational slack in entrepreneurship and management research (Mousa and Reed, 2013; Mousa et al., 2013).

*TMT trust.* We applied previously developed scales with excellent psychometric properties to measure TMT Trust (Jehn, 1995; Jehn and Mannix, 2001; Simons and Peterson, 2000).

Specifically, TMT trust norms were measured with a three-item, Likert-type scale. Responses were gathered from three TMT members and mean scores used for our subsequent analyses.

Coefficient alphas of this measure was 0.91. Table II presents an overview of the variables and measures used, and the reference literature for each construct.

[Insert Table II about here]

### **Analytical Approach**

Fuzzy set qualitative comparative analysis (fsQCA) is an analytic technique based on Boolean algebra that allows for a configurational examination of the causal relationship between a group of antecedent conditions and a related outcome (Ragin, 2000). The main advantage of fsQCA is that it enables the discovery of one or more configurations of cases as combinations of causal conditions, whereby each case is assigned a group-membership score in every causal condition. Cases can be full members, full non-members, or partial members in a causal condition, hence the term 'fuzzy set'. This methodology also allows for the possibility of equifinality, unlike traditional statistical methods (Fiss, 2007).

In addition, while traditional variance methods require a normal probability distribution of variables, fsQCA makes no such assumption. This makes it more suitable for smaller samples such as the one investigated in this study. Since fsQCA does not assume any kind of probability distribution, outliers are not as much of a concern as in regression analysis (Fiss, 2011; Vis, 2012). Our interest in determining one or more configurations of independent variables and their influence on firm OCC, therefore, makes fsQCA the most appropriate analytical approach (Ragin, 2006).

Since our sample is relatively small, it is crucial to utilize a selective approach when choosing causal conditions. While Ragin (2006, p. 6) suggested that ‘as a rule of thumb, 10 or fewer causal conditions ... is not a problem’, later methodological research has suggested a need to be more parsimonious (Greckhamer et al., 2013; Marx, 2006), with a maximum of seven variables for a sample size of 35 cases (Marx, 2006). We consequently use a total of six variables, one outcome (OCC) and five causal conditions at different levels: one industry-level maturity condition, one country-level uncertainty avoidance condition, one individual-level founder CEO presence condition, one firm-level slack condition, and one group-level TMT trust condition.

### **Data Calibration**

Prior to conducting analyses, fsQCA requires variables other than binary dummies to be calibrated (Ragin, 2008). Calibration is done by transforming raw data into membership scores of each case in an antecedent condition, with 1 denoting full membership, and 0, full non-membership. Intermediate, or ‘fuzzy’ values are used for cases that fall between the two extremes. As a rule of thumb, a value of about 0.33 is usually seen as ‘more a non-member than a member’, of 0.5, ‘neither a member nor a non-member’, and 0.67, ‘more a member than a non-

member'. Since there were no strong theoretical reasons for us to assign membership scores manually, we standardized the non-dichotomous variables using the formula (raw value – minimum value) / (maximum value – minimum value). Table III shows the membership scores for each firm and causal condition.

[Insert Table III about here]

Once calibration is complete, it is necessary to specify which configurations of the  $2^k$  possibilities are relevant. For small samples, a frequency cutoff of 1 or 2 is usually advised (Ragin, 2008). To increase robustness and generalizability, we employed 2 as the frequency cutoff. Next, the method requires classification of remaining combinations as either exhibiting the outcome or not. This is done according to a consistency score, which measures the degree to which membership in a configuration is a subset of membership in the outcome. We followed the general standard of applying a threshold of 0.80 (Crilly, 2011; Ragin, 2008).

## **RESULTS**

Results of the fsQCA analyses are presented in Table IV. Consistent with previous studies, we conducted separate analyses for the presence and absence of (high levels of) OCC, as the positive effect of a certain configuration on a desired outcome (which, in our case, means high levels of OCC) does not necessarily mean that the absence of this particular configuration leads to negative outcomes (Crilly, 2011; Fiss, 2011).

Our analyses yielded a total of five configurations: three for relatively high levels of OCC and two for relatively low levels. Each configuration represents a combination of absent or present conditions that are jointly sufficient for producing the indicated outcome. The presence of several solutions for our outcome variable points to equifinality of causal combinations, as assumed by the fuzzy set logic and its systems theory approach (e.g., Fiss, 2011).

In line with general practice, we present the ‘intermediate solutions’, which are most suitable for theoretical interpretation, and use the Quine-McClusky reduction algorithm to identify which causal conditions within each configuration may have a weaker (peripheral condition) or stronger (core condition) impact on the outcome variable (Fiss, 2011; Ragin and Fiss, 2008). Following Ragin and Fiss (2008), we distinguish between core and peripheral conditions in Table IV by emphasizing core conditions in *bold italic font*, and peripheral conditions with a normal font. A blank cell indicates that the causal condition had no meaningful influence on OCC for that particular configuration.

[Insert Table IV about here]

For all five configurations, raw and unique coverages as well as consistency scores, which serve as ‘quality of fit’ indicators, compare quite favorably with prior studies employing fsQCA (e.g., Crilly, 2011; Fiss, 2011). In particular, the three configurations leading to relatively high OCC exhibited strong overall solution coverage and consistency. The solution coverage, which expresses the explanatory power of all the configurations, is 0.877; the solution consistency, which measures how well the theoretical predictions correspond to the actual data, is 0.805. While our causal combinations seem to cover a substantial portion of variability in OCC, the combination of high trust, high slack and founder CEO absent demonstrated in Configuration 1 appears to present the most important causal path (unique coverage is 0.599). In particular, the presence of high trust TMTs emerges as a core condition for high OCC, as it is present in each of the three ‘effective’ configurations. Since these three configurations explain almost all cases of high OCC, as indicated by the high solution coverage, we can be reasonably confident about this conclusion (Fiss, 2011).

Similarly, the two configurations of relatively low OCC exhibited relatively strong overall solution consistency (0.885) and good overall solution coverage (0.580). Late industry development is identified as a peripheral condition for relatively low OCC, as it is part of both configurations. Given the comparatively lower solution coverage, however, we need to be somewhat tentative about this particular conclusion (Fiss, 2011). To aid interpretation, we also report a sample IPO firm that presents the exact causal combination for each of the configurations. Overall, these results show that the five configurations appear to play a major role in explaining OCC; and that our relatively few causal conditions explored in this study are relatively good predictors of OCC.

Notably, each causal condition is represented in one or more of the five configurations as either a core or a peripheral condition. Consequently, our empirical results provide support for each of the five theoretical propositions. While we discuss the specific influences of each causal condition further below, these findings suggest that all five levels of analysis are pertinent to understanding OCC. They suggest that both the imprinting and the strategic choice perspectives are interdependent, as theorized by Hrebiniak and Joyce (1985) and others.

## **DISCUSSION AND CONCLUSIONS**

The purpose of this study was to understand the antecedents of OCC for entrepreneurial threshold firms entering public equity markets for the first time, within a wide variety of national and industry contexts. Extending the debate between environmental determinism and strategic choice (Hrebiniak and Joyce, 1985), this study takes the configurational approach to reveal the multiple effective and ineffective configurations of factors that can collectively interact to influence OCC. Therefore, our findings suggest that there is no ‘one best way’ to adapt in response to the IPO event.

Overall, we found five distinct configurations within the 35 IPO firms. Configuration 1 represents the causal conditions associated with our first set of relatively high-change capacity IPOs. It is characterized by core conditions of high organizational slack and high TMT trust, and a peripheral condition of the absence of a founder CEO at the time of the IPO. This finding supports propositions 3, 4, and 5. One of the Australian IPOs best exemplified this configuration. A government-funded research group founded the IPO in 2002, and it operated in the specialty chemicals sector of the basic materials industry. It was comprised of a five-member TMT with relatively high levels of trust. It was financially strong with a low level of debt and extensive cash when it went public. The firm demonstrated a relatively high capacity for change.

Configuration 2 is our second high-change capacity IPO configuration. It is characterized by a core condition of the founder serving as CEO during the IPO event and peripheral conditions of relatively low national uncertainty avoidance and high TMT trust. This empirical finding provides support for propositions 2, 3, and 5. A British IPO best characterized this configuration. Operating in the broadcasting industry, the firm was established in 2001 by a single founder with broad and deep corporate experience, and was both CEO and chairman of the board at the time of the IPO. Three of the four members of the top management surveyed reported strong trust within the team. Together with a relatively low level of uncertainty avoidance culture in the UK, the firm reported a relatively high capacity for change.

Configuration 3 is our third and final high-change capacity IPO configuration. It is characterized by the core condition of the founder still serving as CEO coupled with peripheral conditions of early industry development and relatively high TMT trust. This finding adds support for propositions 1, 3, and 5. One Mexican IPO best fits this configuration. Founded in 1990, the firm operated in the microfinance industry specializing in providing working capital

loans to micro-entrepreneurs. The firm was initially founded by three co-founders, one of whom was CEO at the time of the IPO. Although the TMT was relatively large and consisted of 16 members (including the three co-founders), there was high trust among the TMT, and the firm had received several awards and nominations for being one of the ‘best companies’ in Mexico and/or Latin America since 2000. The configuration of these imprinting and strategic choice conditions had equipped the firm with a relatively high level of capacity for change.

Configuration 4 was the first of our low-change capacity IPO configurations. It was characterized by the core condition of relatively low TMT trust and the peripheral condition of formation during late industry development. This finding provides support for propositions 1 and 5. A Spanish IPO best matches this configuration, a real estate firm established in 1983. It operates in a relatively mature industry, which could increase the difficulties of initiating changes. Low trust among the three TMT members was reported. Although this configuration showed only one core and one peripheral condition, it makes intuitive sense that when a combination of weak forces facilitating change (low TMT trust) and a strong imprint resisting change (late industry development), the IPO would be associated with relatively low change capacity.

Configuration 5 was the second low-change capacity IPO configuration. It was characterized by the core conditions of founder no longer serving as CEO and relatively low organizational slack, and a peripheral condition of late industry development. This finding provides support for propositions 1, 3, and 4. One Indian IPO best exemplifies this configuration. The firm was founded in 1987, in India’s mature textile manufacturing industry. The firm was controlled by its parent company and operated internationally, with manufacturing outlets in Bangladesh and Indonesia, outsourcing offices in Hong Kong and China, and sales offices in North America and



Europe. It supplied goods to some of the largest international retail chains and high-end fashion brands. With its global reach and intensified competition within the industry, the firm's financial slack was relatively low. These conditions interacted to yield a relatively low change capacity.

### **Theoretical Implications**

Advancing the debate between determinism and strategic choice, this study offers four noteworthy theoretical implications. First, we demonstrate that neither imprinting theory nor strategic choice theory is sufficient alone to determine the causal conditions influencing OCC. Rather, each configuration is composed of causal conditions drawing from each theoretical perspective, as conceptually asserted by Hrebiniak and Joyce (1985). As such, we demonstrate that the two competing perspectives are complementary and interdependent as they seek to explain organizational adaptation capabilities.

However, we challenge Hrebiniak and Joyce's (1985) assertion that strategic choice factors only matter in two of their four configurations. Indeed, our data suggests that strategic choice factors influence the organization's capacity for change in all five empirical configurations, highlighting the critical role of strategic leaders. Furthermore, our typology relies on five different dimensions operating in multiple continuous states while their typology only relied on two dimensions that varied in two discrete states. As a result, we refine and extend Hrebiniak and Joyce's insights using a global sample of IPO firms.

Overall, our findings support the co-evolutionary perspective whereby the firm and its environmental context are mutually interdependent (Koza and Lewin, 1999). Indeed, recent research suggests that this perspective helps to explain entrepreneurial behavior and outcomes (Jones, 2001; Simsek et al., 2003). Future organizational researchers should consider a more co-

evolutionary, systemic perspective (Anderson, 1999; Katz and Kahn, 1978) that considers both constraining and facilitating forces that drive organizational outcomes in the future.

Second, we find causal factors operating on five different levels of analysis that collectively interact to influence OCC. This suggests that prior studies conducted within a single national context and/or a single industry might ignore important contextual factors that could lead to misleading results about OCC. Relatedly, we find that causality is relatively symmetric across four causal conditions (uncertainty avoidance, industry stage of development, organizational slack, and TMT trust) for relatively high and low change capacity situations. However, causality is asymmetric across one causal condition (founder CEO) for high and low change capacity situations. Regarding the asymmetric findings, this research may help explain the conflicting findings in previous linear studies on founder CEOs with organizational outcomes (Jain, 2005; Jayaraman et al., 2000), and it suggests that taking the configurational approach may lead to more robust insights regarding the impact of founding leaders in entrepreneurial contexts.

Third, we provide new insights into imprinting and strategic choice conditions that enhance or hinder firms' capacity for change in an entrepreneurial context. All IPOs encounter new internal and external challenges resulting from the transition to publicly-held status. However, this research demonstrates that some firms will be more successful in coping with those changes than others. By considering the joint influence of both the imprinting and strategic choice perspectives, this research provides a more holistic view of the combined interactions of the environmental and choice conditions affecting firms' entrepreneurial behavior. Therefore, this research broadens our understanding of organizational change in entrepreneurial threshold firms.

Fourth, this research contributes to the growing configurational theory and research that seeks to understand how antecedent conditions are interdependent as they influence organizational outcomes. Fiss et al. (2013, p.1) state:

The notion of configuration – that the whole is best understood from a systemic perspective and should be viewed as a constellation of interconnected elements – is arguably one of the central ideas of organizational studies. Yet, this idea also remains one of the field’s least understood aspects.

There is often an implicit interplay between theory and methods which the configurational approach makes explicit. Social systems are complex, and fuzzy set analysis enables the exploration of the complexity in a logical and orderly fashion using Boolean algebra (Fiss, 2007). It is particularly well suited to studying multi-level antecedent conditions associated with relatively small sample sizes (Ragin, 2008). Our findings also contribute to the relatively small but fast growing literature on configurational theory and methods (Fiss et al., 2013).

### **Practical Implications**

An important practical implication of this study is that founder CEOs can both hinder and facilitate OCC, depending on the trust norms demonstrated by the TMT and the state of organizational slack. For example, when trust within the TMT is high and is coupled with high organizational slack, the absence of the founder CEO does not appear to limit the firm’s capacity for change, as revealed by Configuration 1. However, when organizational slack is low and the founder CEO has been replaced with a professional manager, organizational capacity for change is relatively low, as illustrated in Configuration 5. As most top management teams are fragmented (Hambrick, 1995), building trust within the TMT appears to have profound practical implications for an IPO’s capacity for change.

A second practical implication is that founding a new firm late in the industry life cycle appears to make it difficult for the firm to change and adapt after its IPO. Industry recipes

become ingrained as the industry matures (Spender, 1989), limiting IPO adaptability. Consequently, special attention must be directed to preparations for change in IPOs founded in relatively mature industries. Alternatively, entrepreneurs seeking to be proactive and adaptive might want to focus on nascent industries.

A third practical implication is that this research provides potential investors some useful ideas for making investment decisions related to IPO firms. IPO firms are notoriously difficult to value due to the limited information available to assess their current and future prospects. Current research suggests that potential investors rely heavily on crude structural proxies, such as ownership structure (Yeh et al., 2008) or board composition (Bertoni et al., 2014). Based on our research, investors might want to discuss the IPO firm's change capability during 'roadshow' interactions with the TMT and CEO, and consider other situational factors when considering the future prospects for the firm, such as slack resources and industry stage of development. While OCC does not guarantee future financial success, it has been shown to be positively associated with many desirable financial outcomes (Judge, 2011).

### **Limitations and Future Directions**

One aspect that might limit generalizability is the nature of our sample. While we conducted a field study of 35 IPOs spread across 15 countries, these particular IPOs may or may not be generalizable to the national IPO market in which they function. Furthermore, to focus on the influence of national cultural institutions, we studied domestic IPOs. This approach enables a more focused examination of causal factors, but it may not adequately capture the heightened complexities associated with multiple IPO listings. Recent research has demonstrated that multiple listings on domestic and foreign exchanges are increasingly common (Moore et al., 2012). Therefore, future research should explore how foreign listings might augment our results.

A second limitation is that we examined the *change capacity* of the firm, but not the *actual changes* made by the firm. Our research design enabled us to examine the firms' founding imprint conditions prior to the IPO event coupled with the strategic choice conditions at the time of the IPO event. This examination is an improvement over previous research which infers these capabilities but it also remains proximate as we did not examine lagged outcomes after the IPO event. Future research should not only examine past and current conditions, but also subsequent outcomes in order to address endogeneity concerns with our causal predictions.

## **Conclusions**

Despite these limitations, this study yields several new theoretical and practical insights for scholars, managers, and investors. Our utilization of fuzzy set analysis to identify configurations of variables associated with high and low levels of OCC breaks new ground in our understanding of these entrepreneurial threshold firms operating in a variety of economies. Our findings lend support for complexity theory, which argues that causal factors are not independent of each other and operate on multiple levels of analysis (Pellissier, 2012). In our attempt to provide more sophisticated causal reasoning (Fiss, 2007; 2011), our study offers novel explanations for OCC, consistent with co-evolutionary theory (Koza and Lewin, 1999; Simsek et al., 2003).

Coviello and Jones (2004) called for more and better cross-national studies of international entrepreneurship, as well as for more field studies. We responded to this plea by conducting in-depth field studies of 35 IPO firms operating in 15 developed and developing countries. Our results suggest that trust norms are imperative within the TMT but, beyond that imperative, there are multiple paths to becoming change capable. As such, our data lend further empirical and theoretical support for the equifinality of organizational outcomes, and challenge the dominant linear paradigm that assumes one optimal path (Pellissier, 2012).

Table I. Sample construction by country

<i>Country</i>	<i>2008 GDP rank</i>	<i>2008 GDP (million USD)</i>	<i>2008 global GDP %</i>	<i>Solicitation response rate</i>	<i>Number of IPOs in sample</i>
Australia	14	1,039,420	1.7%	42.9%	3
Austria	25	414,671	0.7%	50.0%	2
Canada	11	1,499,110	2.4%	50.0%	2
China	3	4,521,830	7.4%	30.0%	3
Germany	4	3,634,530	5.9%	10.0%	1
India	12	1,214,210	2.0%	25.0%	2
Italy	7	2,296,630	3.7%	33.3%	2
Mexico	13	1,089,880	1.8%	33.3%	2
Nigeria	39	207,118	0.3%	25.0%	2
Saudi Arabia	23	475,093	0.8%	10.0%	2
Singapore	43	193,332	0.3%	83.3%	5
Spain	10	1,594,470	2.6%	75.0%	3
Sweden	22	487,576	0.8%	75.0%	3
United Kingdom	6	2,662,650	4.3%	50.0%	1
United States	1	14,369,100	23.4%	33.3%	2
	Total:	35,699,620	58.2%	41.7%	35

Source for GDP statistics: World Bank (2008).

Table II. Variables and measures

<i>Variables</i>	<i>Definition</i>	<i>Measures</i>	<i>References</i>
Organizational capacity for change (OCC)	A dynamic capability whereby the firm consistently demonstrates an ability to adapt to its environment in a constructive and timely way.	$OCC = \sum OCC_i / n$ whereby $i$ represents at least 1 top, middle, and frontline employee; and $n$ is the total number of respondents per firm based on 32 item survey instrument administered in 2010.	Judge and Elenkov (2005); Judge and Douglas (2009); Judge (2011)
<i>Imprinting Conditions</i>			
Industry stage of development (ISD)	The maturity of the market, technology, and competitive structures within the primary industry at the time of IPO founding.	ISD = 0, 1, 2, or 3 depending on the aggregate stage of development of the market, technology, and competitive structures within the industry of the firm at time of founding.	Tay et al. (1992); Tay and Low (1994)
National uncertainty avoidance (NUA)	Societal norms describing the degree to which the members of a society feel uncomfortable with uncertainty and ambiguity.	NUA = Aggregated work values index by country. Measure ranges from relatively low uncertainty avoidance (8) to relatively high uncertainty avoidance (86) cultures.	Hofstede et al. (2010); Taras et al. (2012)
Founder CEO presence (FCP)	Presence of founding entrepreneur serving in the CEO position at the time of the firm's IPO.	FCP is either 1 where founder holds CEO position at the time of the IPO event; or 0 otherwise.	Daily and Dalton (1992); Nelson (2003)
<i>Choice Conditions</i>			
Organizational financial slack (OFS)	Amount of discretionary financial assets available to the firm at time of IPO.	$OFS = (Current\ Assets - Current\ Liabilities) / (Current\ Assets)$ for the year in which the firm went public.	Mousa and Reed (2013); Mousa et al. (2013);
Top management team trust (TMT Trust)	Trust among the top management team members.	$TMT\ Trust = \sum TMT\ Trust_i / n$ where $i$ represents one of three members of the top management team filling out a 3 item survey dealing with trust within the team.	Jehn (1995); Simons and Peterson (2000); Jehn and Mannix (2001)

Table III. Calibration table used to determine configurations

<i>Company ID</i>	<i>OCC</i>	<i>Industry stage of development</i>	<i>Uncertainty avoidance</i>	<i>Founder CEO presence</i>	<i>Organizational financial slack</i>	<i>TMT trust</i>
Australia1	0.801	0.667	0.551	0	0.995	0.778
Australia2	0.564	0.667	0.551	0	0.997	0.875
Australia3	0.703	1.000	0.551	0	0.884	0.833
Austria1	0.027	0.000	0.795	0	0.286	0.223
Austria2	0.354	1.000	0.795	0	0.701	0.695
Canada1	0.725	1.000	0.513	0	0.760	0.918
Canada2	1.000	0.000	0.513	1	0.415	0.890
China1	0.812	1.000	0.410	0	0.505	0.805
China2	0.428	0.000	0.410	1	0.548	0.918
China3	0.935	1.000	0.410	0	0.562	0.945
Germany1	0.403	1.000	0.731	1	0.622	1.000
India1	0.608	0.667	0.410	1	0.600	0.695
India2	0.087	1.000	0.410	0	0.406	0.528
Italy1	0.561	1.000	0.859	1	0.241	0.805
Italy2	0.365	0.667	0.859	0	0.343	0.750
Mexico1	0.812	0.333	0.949	1	0.440	0.973
Mexico2	0.763	0.333	0.949	0	0.739	0.833
Nigeria1	0.450	0.333	0.590	0	0.876	0.668
Nigeria2	0.466	0.000	0.590	0	0.801	0.610
SaudiArabia1	0.371	1.000	0.769	0	0.999	0.168
SaudiArabia2	0.515	1.000	0.769	0	0.831	0.418
Singapore1	0.591	1.000	0.000	1	0.483	0.833
Singapore2	0.559	1.000	0.000	0	0.898	0.640
Singapore3	0.362	1.000	0.000	0	0.962	0.390
Singapore4	0.744	0.000	0.000	1	0.357	0.640
Singapore5	0.207	1.000	0.000	1	0.037	0.528
Spain1	0.272	1.000	1.000	0	1.000	0.610
Spain2	0.000	0.667	1.000	0	1.000	0.000
Spain3	0.643	0.333	1.000	0	1.000	0.750
Sweden1	0.605	0.667	0.269	0	0.491	0.918
Sweden2	0.253	0.667	0.269	0	0.421	0.555
Sweden3	0.210	1.000	0.269	0	0.565	0.445
UK1	0.744	0.667	0.346	1	0.000	0.918
USA1	0.847	0.333	0.487	0	0.961	0.750
USA2	0.561	0.667	0.487	0	0.973	0.750



Table IV. Fuzzy set configurations of OCC within a cross-national sample of IPOs (N = 35)

	<i>High OCC</i>			<i>Low OCC</i>	
<i>Causal condition</i>	<i>Configuration 1</i>	<i>Configuration 2</i>	<i>Configuration 3</i>	<i>Configuration 4</i>	<i>Configuration 5</i>
<i>Imprinting conditions</i>					
Industry stage of development			Early industry development	Late industry development	Late industry development
National uncertainty avoidance		Low uncertainty avoidance			
Founder CEO presence	Founder absent	<b>Founder present</b>	<b>Founder present</b>		<b>Founder absent</b>
<i>Strategic choice conditions</i>					
Organizational financial slack	<b>High slack</b>				<b>Low slack</b>
TMT trust	<b>High trust</b>	High trust	High trust	<b>Low trust</b>	
<i>Exemplar IPO:</i>	Australia <sup>3</sup>	United Kingdom <sup>1</sup>	Mexico <sup>1</sup>	Spain <sup>2</sup>	India <sup>2</sup>
Raw coverage:	0.599	0.221	0.179	0.509	0.258
Unique coverage:	0.599	0.097	0.055	0.323	0.071
Consistency:	0.795	0.849	0.870	0.552	0.836
Solution coverage	0.877			0.580	
Solution consistency	0.805			0.885	

Note: Core conditions are marked with ***bold italic*** font. Peripheral conditions are in regular font.

## REFERENCES

- Agarwal, R., Sarkar, M. B., and Echambadi, R. (2002). 'The conditioning effect of time on firm survival: An industry life cycle approach'. *Academy of Management Journal*, **45**, 971–94.
- Anderson, P. (1999). 'Complexity theory and organizational science'. *Organization Science*, **10**, 216–32.
- Anderson, P. and Tushman, M. L. (1990). 'Technological discontinuities and dominant designs: A cyclical model of technological change'. *Administrative Science Quarterly*, **35**, 604–33.
- Anderson, C. R. and Zeithaml, C. P. (1984). 'Stage of the product life cycle, business strategy, and business performance'. *Academy of Management Journal*, **27**, 5–24.
- Baron, J. N., Burton, M. D., and Hannan, M. T. (1999). 'Engineering bureaucracy: The genesis of formal policies, positions, and structures in high-technology firms'. *Journal of Law, Economics, and Organization*, **15**, 1–41.
- Beer, M. and Nohria, N. (Eds) (2000). *Breaking the Code of Change*. Boston, MA: Harvard Business School Press.
- Bertoni, F., Meoli, M., and Vismara, S. (2014). 'Board independence, ownership structure, and IPO valuation'. *Corporate Governance: An International Review*, Early view online publication, DOI: 10.1111/corg.12051.
- Boeker, W. (1989). 'Strategic change: The effects of founding and history'. *Academy of Management Journal*, **32**, 489–515.
- Bourgeois, L. J. (1984). 'Strategic management and determinism'. *Academy of Management Review*, **9**, 586–96.
- Carroll, G. R. and Hannan, M. T. (2004). *The Demography of Corporations and Industries*. Princeton, NJ: Princeton University Press.

- Chakravarthy, B. and Lorange, P. (2008). 'Driving renewal: The entrepreneur-manager'. *Journal of Business Strategy*, **29**, 14–21.
- Child, J. (1972). 'Organization structure, environment and performance: The role of strategic choice'. *Sociology*, **6**, 1–22.
- Coviello, N. and Jones, M. (2004). 'Methodological issues in international entrepreneurship research'. *Journal of Business Venturing*, **19**, 485–508.
- Crilly, D. (2011). 'Predicting stakeholder orientation in multinational enterprise: A mid-range theory'. *Journal of International Business Studies*, **42**, 694–717.
- Crossland, C. and Hambrick, D. (2011). 'Differences in managerial discretion across countries: How national level institutions affect the degree to which CEOs matter'. *Strategic Management Journal*, **32**, 797–817.
- Daily, C. and Dalton, D. (1992). 'Financial performance of founder-managed versus professionally-managed small corporations'. *Journal of Small Business Management*, **30**, 25–35.
- Demers, E. and Joos, P. (2007). 'IPO failure risk'. *Journal of Accounting Research*, **45**, 333–53.
- De Rond, M. and Thietart, R. A. (2007). 'Choice, chance, and inevitability in strategy'. *Strategic Management Journal*, **52**, 535–51.
- Dirks, K. and Ferrin, D. (2001). 'The role of trust in organizational settings'. *Organization Science*, **12**, 450–67.
- Dobrev, S.D. and Gotsopoulos, A. (2010). 'Legitimacy vacuum, structural imprinting, and the first mover disadvantage'. *Academy of Management Journal*, **53**, 1153–74.
- Doidge, C., Karolyi, G., and Stulz, R. M. (2013). 'The U.S. left behind? Financial globalization and the rise of IPOs outside the U.S'. *Journal of Financial Economics*, **110**, 546–73.
- Fan, D. (2007). 'Towards complex holism'. *Systems Research & Behavioral Science*, **24**, 417–

30.

- Filatotchev, I. and Piesse, J. (2009). 'R&D, internationalization and growth of newly listed firms: European evidence'. *Journal of International Business Studies*, **40**, 1260–76.
- Finkelstein, S. and Hambrick, D. C. (1990). 'Top-management-team tenure and organizational outcomes: The moderating role of managerial discretion'. *Administrative Science Quarterly*, **35**, 484–503.
- Fischer, H. and Pollock, T. (2004). 'Effects of social capital and power on surviving transformational change: The case of initial public offerings'. *Academy of Management Journal*, **47**, 463–81.
- Fiss, P. (2007). 'A set-theoretic approach to organizational configurations'. *Academy of Management Review*, **32**, 1180–98.
- Fiss, P. (2011). 'Building better causal theories: A fuzzy set approach to typologies in organization research'. *Academy of Management Journal*, **54**, 393–413.
- Fiss, P., Cambré, B., and Marx, A. (Eds) (2013). *Configurational Theory and Methods in Organizational Research*. Bingley, England: Emerald Group.
- Geletkanycz, M. (1997). 'The salience of "culture's consequences": The effects of cultural values on top executive commitment to the status quo'. *Strategic Management Journal*, **18**, 615–35.
- Greckhamer, T., Misangyi, V., and Fiss, P. (2013). 'The two QCAs: From a small-N to a large-N set theoretic approach', in Fiss, P. C., Cambré, B. and Marx, A. (Eds), *Configurational Theory and Methods in Organizational Research*. Bingley: Emerald Group, 49–75.
- Greiner, L. (1972). 'Evolution and revolution as organizations grow'. *Harvard Business Review*, **50**(4), 37–46.

- Guo, R., Lev, B., and Zhou, N. (2004). 'Competitive costs of disclosure by biotech IPOs'. *Journal of Accounting Research*, **42**, 319–39.
- Hambrick, D. C. (1995). 'Fragmentation and the other problems CEOs have with their top management teams'. *California Management Review*, **37**(3), 110–27.
- Hambrick, D. C. and D'Aveni, R. (1988). 'Large corporate failures as downward spirals'. *Administrative Science Quarterly*, **33**, 1–23.
- Hambrick, D. C. and Finkelstein, S. (1987). 'Managerial discretion: A bridge between polar views of organizational studies'. *Research in Organizational Behavior*, **9**, 369–406.
- Hambrick D. C., Finkelstein, S., and Cannella, A. A. (2009). *Strategic Leadership: Theory and Research on Executives, Top Management Teams, and Boards*. New York: Oxford University Press.
- Hambrick, D. C. and Mason, P. A. (1984). 'Upper echelons: The organization as a reflection of its top managers'. *Academy of Management Review*, **9**, 193–206.
- Hannan, M. T. and Freeman, J. (1977). 'The population ecology of organizations'. *American Journal of Sociology*, **82**, 929–64.
- Hannan, M. T. and Freeman, J. (1984). 'Structural inertia and organizational change'. *American Journal of Sociology*, **49**, 149–64.
- Harzing, A. W. and Hofstede, G. (1996). 'Planned change in organizations: The influence of national culture', in Bamberger, P. A., Erez, M., and Bacharach, S. B. (Eds), *Research in the Sociology of Organizations: Cross-Cultural Analysis of Organisations*, Greenwich, CT: JAI Press, 297–340.
- He, L. (2008). 'Do founders matter? A study of executive compensation, governance structure and firm performance'. *Journal of Business Venturing*, **23**, 257–79.

- Hofstede, G. (1980). 'Motivation, leadership and organization: Do American theories apply abroad?'. *Organizational Dynamics*, **9**, 42–62.
- Hofstede, G. (1983). 'The cultural relativity of organizational practices and theories'. *Journal of International Business Studies*, **14**, 75–95.
- Hofstede, G., Hofstede, G. J., and Minkov, M. (2010). *Cultures and Organizations: Software of the Mind* (3rd Edition), New York: McGraw-Hill.
- Howton, S., Howton, S., and Olsen, G. (2001). 'Board ownership and IPO returns'. *Journal of Economics and Finance*, **25**, 100–20.
- Hrebiniak, L. G. and Joyce, W. J. (1985). 'Organizational adaptation: strategic choice and environmental determinism'. *Administrative Science Quarterly*, **30**, 336–49.
- Jain, B. (2005). 'The post-IPO investment and financing decisions of founder versus nonfounder CEOs'. *Corporate Finance Review*, **10**, 19–31.
- Jayaraman, N., Khorana, A., Nelling, E., and Covin, J. (2000). 'CEO founder status and firm financial performance'. *Strategic Management Journal*, **21**, 1215–24.
- Jehn, K. A. (1995). 'A multimethod examination of the benefits and detriments of intragroup conflict'. *Administrative Science Quarterly*, **40**, 256–82.
- Jehn, K. A. and Mannix, E. A. (2001). 'The dynamic nature of conflict: A longitudinal study of intragroup conflict and group performance'. *Academy of Management Journal*, **44**, 238–51.
- Jones, C. (2001). 'Co-evolution of entrepreneurial careers, institutional rules and competitive dynamics in American film, 1895-1920'. *Organization Studies*, **22**, 911–44.
- Judge, W. Q. (2011). *Building Organizational Capacity for Change: The Strategic Leader's New Mandate*. New York: Business Expert Press.

- Judge, W. Q. and Douglas, T. (2009). 'Organizational capacity for change: The systematic development of a scale'. *Journal of Organizational Change Management*, **22**, 635–49.
- Judge, W. Q. and Elenkov, D. (2005). 'Organizational capacity for change and environmental performance: An empirical assessment of Bulgarian firms'. *Journal of Business Research*, **58**, 893–901.
- Judge, W. Q., Naoumova, I., Douglas, T., and Koutzevol, N. (2009). 'Organizational capacity for change and firm performance in Russia'. *International Journal of Human Resources Management*, **20**, 1737–52.
- Judge W. Q. and Zeithaml C. P. (1992). 'Institutional and strategic choice perspectives on board involvement in the strategic decision process'. *Academy of Management Journal*, **35**, 766–94.
- Katz, D. and Kahn, R. (1978). *The Social Psychology of Organizations*. New York: Wiley.
- Kellermanns, F., Walter, J., Lechner, C., and Floyd, S. (2005). 'The lack of consensus about strategic consensus: Advancing theory and research'. *Journal of Management*, **31**, 719–37.
- Kim, W. and Weisbach, M. (2008). 'Motivations for public equity offers: An international perspective'. *Journal of Financial Economics*, **87**, 281–307.
- Klein, K. J., Dansereau, F., and Hall, R.J. (1994). 'Levels issues in theory development, data collection, and analysis'. *Academy of Management Journal*, **19**: 195–229.
- Kogut, B. (1993). 'Learning, or the importance of being inert: Country imprinting and international competition', in Ghoshal, S. and Westney, E. (Eds), *Organization Theory and the Multinational Corporation*, New York: St Martin's Press, 136–54.
- Kogut, B. and Zander, U. (2000). 'Did socialism fail to innovate? A natural experiment of the two Zeiss companies'. *American Sociological Review*, **65**, 169–90.

- Koza, M. and Lewin, A. (1999). 'The coevolution of network alliances: A longitudinal analysis of a professional services network'. *Organization Science*, **10**, 638–52.
- Kriauciunas, A. and Shinkle, G. (2008). *Organizational Imprinting: Informing Firm Behavior in Domestic and International Contexts*. Purdue CIBER Working Papers No. 58, 1–23.
- Krippendorff, A. (2004). *Content Analysis: An Introduction to Its Methodology*. Thousand Oaks, CA: Sage Publications.
- Lawler, E. E. and Worley, C. G. (2006). *Built to Change*. San Francisco, CA: Jossey-Bass.
- Lu, Y., Zhou, L., Bruton, G. and Li, W. (2010). 'Capabilities as a mediator linking resources and the international performance of entrepreneurial firms in an emerging economy'. *Journal of International Business Studies*, **41**, 419–36.
- Lubatkin, M., Lane, P., Collin, S., and Very, P. (2007). 'An embeddedness framing of governance and opportunism: Towards a cross-nationally accommodating theory of agency'. *Journal of Organizational Behavior*, **27**, 43–58.
- MacCurtain, S., Flood, P. C., Ramamoorthy, N., West, M. A., and Dawson, J. F. (2008). *Top Team Trust, Knowledge Sharing and Innovation*. Link Working Paper Series (05–08).
- Marquis, C. (2003). 'The pressure of the past: network imprinting in intercorporate communities'. *Administrative Science Quarterly*, **48**, 655–89.
- Marquis, C. and Tilcsik, A. (2013). 'Imprinting: Toward a multilevel theory'. *Academy of Management Annals*, **7**, 193–242.
- Marx, A. (2006) *Towards More Robust Model Specification in QCA Results from A Methodological Experiment*. COMPASSS Working Paper, Brussels: COMPASSS.
- McAllister, D. J. (1995). 'Affect- and cognition-based trust as foundations for interpersonal cooperation in organizations'. *Academy of Management Journal*, **38**, 24–59.



- Moore, C., Bell, R. G., Filatotchev, I., and Rasheed, A. (2012). 'Foreign IPO capital market choice: Understanding the institutional fit of corporate governance'. *Strategic Management Journal*, **33**, 914–37.
- Mousa, F.-T. and Reed, R. (2013). 'The impact of slack resources on high-tech IPOs'. *Entrepreneurship Theory & Practice*, **37**, 1123–47.
- Mousa, F. T., Marlin, D., and Ritchie, W. (2013). 'Configurations of slack and their performance implications: An examination of high-tech IPOs', *Management Decision*, **51**, 225–47.
- Nelson, T. (2003). 'The persistence of founder influence: Management, ownership, and performance effects at initial public offering'. *Strategic Management Journal*, **24**, 707–24.
- Papadakis, V. M. and Barwise, P. (2002). 'How much do CEOs and top managers matter in strategic decision-making?'. *British Journal of Management*, **13**, 83–95.
- Pegels, C. C., Song, Y. I., and Yang, B. (2000). 'Management heterogeneity, competitive interaction groups, and firm performance'. *Strategic Management Journal*, **21**, 911–23.
- Pellissier, R. (2012). 'A proposed frame of reference for complexity management as opposed to the established linear management strategies'. *International Journal of Organizational Innovation*, **5**, 6–67.
- Pollock, T. and Rindova, V. (2003). 'Media legitimation effects in the market for initial public offerings'. *Academy of Management Journal*, **46**, 631–42.
- Quigley, T. J. and Hambrick, D. C. (2012). 'When the former CEO stays on as board chair: Effects on successor discretion, strategic change and performance'. *Strategic Management Journal*, **33**, 834–59.
- Ragin, C. C. (2000). *Fuzzy-set Social Science*. Chicago, IL: University of Chicago Press.

- Ragin, C. C. (2006). *User's Guide to Fuzzy-set/Qualitative Comparative Analysis 2.0*. Tucson, AZ: University of Arizona Department of Sociology.
- Ragin, C. C. (Ed) (2008). *Redesigning Social Inquiry: Fuzzy Sets and Beyond*. Chicago, IL: University of Chicago Press.
- Ragin, C. C. and Fiss, P. (2008). 'Net effects versus configurations: An empirical demonstration', in Ragin, C. C. (Ed), *Redesigning Social Inquiry: Fuzzy Sets and Beyond*. Chicago, IL: University of Chicago Press, 190–212.
- Ranft and O'Neill (2001). 'Board composition and high-flying founders: Hints of trouble to come?'. *Academy of Management Executive*, **15**, 126–38.
- Ritter, J. (2003). 'Differences between European and American IPO markets'. *European Financial Management*, **9**, 421–34.
- Ruppel, C. P. and Harrington, S. J. (2000). 'The relationship of communication, ethical work climate, and trust to commitment and innovation'. *Journal of Business Ethics*, **25**, 313–28.
- Schneider, S. C. (1985). *Strategy Formulation: The Impact of National Culture - The Case of France*. Paper presented at the Northeast Regional Meeting of the Academy of International Business, Boston, MA.
- Shane, S. (1993). 'Cultural influences on national rates of innovation'. *Journal of Business Venturing*, **8**, 59–79.
- Singh, J. (1986). 'Performance, slack, and risk taking in organizational decision making'. *Academy of Management Journal*, **29**, 562–85.
- Simons, T. and Peterson, R. (2000). 'Task conflict and relationship conflict in top management teams: The pivotal role of intragroup trust'. *Journal of Applied Psychology*, **85**, 102–11.

- Simsek, Z., Lubatkin, M. and Floyd, S. (2003). 'Inter-firm networks and entrepreneurial behaviour: A structural embeddedness perspective'. *Journal of Management*, **29**, 427–42.
- Spender, J. C. (1989). *Industry Recipes: An Inquiry into the Nature and Sources of Managerial Judgment*. Oxford, England: Basil Blackwell.
- Stinchcombe, A. (1965). 'Social structure and organizations', in March, J. G. (Ed), *Handbook of organizations*. Chicago, IL: Rand McNally, 142–93.
- Talaulicar, T., Grundei, J., and Werder, A. (2005). 'Strategic decision making in start-ups: The effect of top management team organization and processes on speed and comprehensiveness'. *Journal of Business Venturing*, **20**, 519–41.
- Talke, K., Salomo, S., and Rost, K. (2010). 'How top management team diversity affects innovativeness and performance via the strategic choice to focus on innovation fields'. *Research Policy*, **39**, 907–18.
- Taras, V., Steel, P., and Kirkman, B. (2012). 'Improving national cultural indices using a longitudinal meta-analysis of Hofstede's dimensions'. *Journal of World Business*, **47**, 329–41.
- Tay, P. and Low, L. (1994). 'The fuzzy industry maturity grid (FIMG) and its application to the Singapore construction industry'. *Construction Management and Economics*, **12**, 125–38.
- Tay, P. H., Tham, K. W., and Ho, D. K. H. (1992). 'The fuzzy industry maturity grid and its application to the Singapore property sector'. *Urban Studies*, **29**, 1305–22.
- Tushman, M. L. and Anderson, P. (1986). 'Technological discontinuities and organizational environments'. *Administrative Science Quarterly*, **31**, 439–65.
- Tushman, M. L. and Romanelli, E. (1985). 'Organizational evolution: A metamorphosis model of convergence and reorientation', in Staw, B. and Cummings, L. (Eds), *Research in Organization Behavior*, **7**, Greenwich, CT: JAI Press., 171–222.

- Vis, B. (2012). 'The comparative advantages of fsQCA and regression analysis for moderately large-*N* analyses'. *Sociological Methods & Research*, **41**, 168–98.
- World Bank (2008). *Statistical Indicators*. Accessed on 17 Feb. 2014, available at <http://data.worldbank.org/indicator/NY.GDP.MKTP.CD>.
- Yeh, Y. H., Shu, P. G., and Guo, R. J. (2008). 'Ownership structure and IPO valuation: Evidence from Taiwan'. *Financial Management*, **37**, 141–61.
- Zahra, S. and Filatotchev, I. (2004). 'Governance of the entrepreneurial threshold firm: A knowledge-based perspective'. *Journal of Management Studies*, **41**, 885–97.