

**RISK AND EXPERIENCE IN FOREIGN DIRECT INVESTMENT  
DECISION MAKING: EVIDENCE FROM CHINESE FIRMS**

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## ACKNOWLEDGEMENT

This is not the end. It is the beginning of the end – the end to a wonderful journey.

I have wondered, to be honest, how come I achieved absolutely nothing over the course of four years. Then all of a sudden, the pieces of the jigsaw came together marvellously. Despite that I have hardly achieved anything great, at least this thesis is worthy of a bottle of champagne. No way is this possible without my supervisors' help. Peter is not just a legend. The fascinating theoretical contention that experience can translate to heuristics and boost performance is perfectly evident in his thinking. Jeremy always brings in alternative but insightful perspective – a philosophy he started breeding in the 1980s. Hinrich is a typical German, so much so that he even made me enjoy working with other Germans. It was extremely luck of me to have been guided by the right role models. I have to admit that I have been free-riding on their outstanding reputation over the conferences. It became a driver for me to explore the world. Had it not been Brighton, Helsinki, Istanbul, Copenhagen, Vancouver and many others, the four years would have been much more miserable.

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To my family

## ABSTRACT

International business activities and foreign direct investment in particular involve an element of risk and uncertainty, sometimes to a great extent. Despite this almost axiomatic statement, less academic research has been conducted on this subject, compared to the considerations of return and cost. While the globalisation era introduces an integration of world economy, ever more diverse types of risks are looming on the horizon in relation to cross-border investment, ranging from political unrest to creeping appropriation, from natural disaster to terrorism, and from technological failure to industrial espionage, all of which tend to deter the free movement of capital and value-adding resources around the world.

This thesis provides by far the most extensive review of the research on risk and uncertainty across the macro management fields of studies. Particular attention has been paid to construct clarity and how construct clarity can serve to categorise a vast body of knowledge and address previous inconsistent conclusions. To further the inquiry, this thesis focuses on one of the conceptualisations of risk that is most relevant to the context of foreign investment decision making. New insights are generated by proposing a microfoundational framework based on a key construct – risk propensity – as a necessary complement to the current research on risk in foreign direct investment. Conventional understanding of the capabilities paradigm is reformulated in this light. In order to test the efficacy of “risk propensity” and the static assumption of risk preference embedded in the conventional theories, this thesis draws upon quasi-experiment methods and models managerial heterogeneity based on stated preference data. In addition to individual level choice modelling, firm level analysis of location choice is conducted, yielding new insights into the role of experience in firms’ decision making. China provides the empirical setting for both analyses. It is found that a theoretical understanding of risk helps explain the varying effect of context and experience on risk-taking. Generalisations of this statement may be made to strategic decision making, organisational learning and behavioural strategy research.

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## ABBREVIATIONS

AIC	Akaike information criterion
BIC	Bayesian information criterion
CAIC	Consistent Akaike information criterion
CL	Conditional logit
CSRC	China Securities Regulatory Commission
DCM	Discrete choice method
EM	Expectation-maximisation
EMNE	Emerging multinational
FDI	Foreign direct investment
GDP	Gross domestic product
IB	International business
IMF	International Monetary Fund
JV	Joint venture
LCL	Latent class logit
LRT	Log-likelihood ratio test
M&A	Mergers and acquisitions
MIGA	Multilateral Investment Guarantee Agency
MNE	Multinational enterprise
MOFCOM	Ministry of Commerce (China)
MXL	Mixed logit
RUT	Random utility theory
SOE	Stated-owned enterprise
WGI	Worldwide Governance Indicators
WIPO	World Intellectual Property Organisation
WOS	Wholly-owned subsidiary

# 1 GENERAL INTRODUCTION

Despite that world economy is under recovery, the financial crisis of the Euro zone and the sluggish growth of the leading emerging economies cast new clouds over the economic outlook for the next few years. Global investors have expressed renewed concerns over political risk and uncertainty in the aftermath of the Greek crisis and the Arab Spring. If the potential of cross-border investment was fully unleashed, the world economic recovery would gain much stronger momentum. Surprisingly, even though risk is one of the defining features behind the phenomenon of foreign investment, it is also among the under-addressed topics in international business (IB) research. This is unfortunate since risk and uncertainty could be one of the key areas over which IB scholars can produce significant, impactful knowledge, and contribute to the management scholarship at large. The current thesis is motivated by the observation that empirical IB studies tend to use intuitive, *ad hoc* definitions of the concepts, leaving unaddressed the ambiguity on what is meant by the term risk and how risk influences strategic decision making. The choices among the plethora of risk and uncertainty measures seem to have been driven by the researchers' idiosyncrasies and discretions rather than a coherent theoretical framework. We seek a theoretical solution to this problem, and make the initial attempt to close the gap in the literature.

Our efforts to address this issue follow through four integrated steps. In Chapter 2, we examine various theories of risk and uncertainty from which a novel typology of conceptualisations is developed. Our typology clearly delineates between the four categories; 'risk as frequency', 'risk as propensity', 'uncertainty as degree of confidence', and 'uncertainty as opportunity creation'. This enables us to categorise the vast empirical research agendas and theoretical traditions across the strategy, entrepreneurship and international business literatures on strategic decision making, and attribute some inconclusive findings to the contested views on

risk and uncertainty. Future research opportunities arise from “boundary-spanning” thinking that links a) one category with another, and b) our typology with general strategy theory.

Based on the previous conceptual clarification, Chapter 3 presents a theoretical analysis of the risk research in the foreign direct investment (FDI) context. Studies of how firms respond to host country risk have assigned explanatory primacy to organisational capability and managerial risk preference. The organisation-level account is built on the premise that capability is a prerequisite for risk-taking while the individual-level account focuses on the managers’ intrinsic behavioural attitude. Without integrating one with the other, the former is open to many alternative explanations while the latter remains only a source of heterogeneity. We propose that employing the microfoundations approach can address the limitations of each account and yield a fuller understanding of FDI risk-taking. Drawing upon behavioural decision theory and the concept of risk propensity, we describe the lower-level mechanisms that generate the empirical regularity between firm experience and risk-taking, which has been attributed to the macro-level capabilities paradigm. We finalise the framework with an account as to how individual-level mechanisms can be incorporated into the context of organisational strategic decision-making.

In Chapter 4, we test empirically the concept of risk propensity and its antecedents in the context of FDI location choice using primary, quasi-experiment data. In internationalisation theories, a firm’s high-risk investment is considered to be a function of managers’ dispositional risk preference and its experience in high-risk countries. However, the literature does not directly examine what is learned from experience but rather attributes the relationship between experience and subsequent high-risk investment to unobserved firm capabilities. This study draws on the concept of risk propensity to examine the experience-based cognitive process underlying risky location decisions. Discrete choice modelling shows that managers hold heterogeneous risk propensities, which can be explained by their perceived past success of home country venturing and the firm’s potential slack resources. The results lend strong support to the

lower-level mechanism proposed in Chapter 3. Given the various aspects of international risk, applying risk propensity in the FDI context also makes a significant contribution to behavioural decision theory.

In Chapter 5, we test empirically the moderating role of experience in FDI location choice using secondary firm-level data. Firstly, FDI literature has presented consistent evidence that firm experience moderates the negative effect of risk on entry, this conclusion is contested by recent research. By revisiting the conceptualisation of risk by economists and behaviourists, we show that the proposed learning mechanism only applies to controllable risk, not non-controllable risk. As assessing controllable risk involves self-evaluation of risk-reducing capability, it is posited that firms have differential tendency to take such risks even when experience is accounted for. We find a significant variation in firms' responses to controllable risk, as opposed to non-controllable risk. This lends further support to our microfoundational framework proposed in Chapter 3. Secondly, we employ signalling theory to understand ministerial visits to the host country. The visits by home country's commerce minister accompanied by executive delegates rather than a political leader send an efficacious signal of its approval of a foreign regime's inward investment policies and home country's institutional support, which encourages domestic firms' entry into that host country. International experience reduces signal strength and negatively moderates this relationship. This suggests that in cases where firm capabilities cannot be established, firms may rely on external assurance about the investment location. In other words, external assurance substitutes for internal learning.

Overall, the key novelty of this thesis lies in addressing the concepts of risk propensity, controllable risk and non-controllable risk, and in shedding light on the cognitive process of learning. We contribute to the FDI literature by connecting these concepts with the current scholarly debates. We hope this thesis can clarify some lasting confusions over the understanding of FDI, and provoke researchers' thinking on such topics as risk, uncertainty, learning process and managerial heterogeneity.

## **2 THE ROLE OF RISK PROPENSITY IN STRATEGIC DECISION-MAKING**

### **2.1 Introduction**

Strategic decisions, by definition, have significant potential consequence for the organisation. One of the prominent features of strategic decisions is the prevalence of risk and uncertainty. Comparing the empirical properties of alternative risk and uncertainty measures (Aaron, 1994; Downey, Hellriegel, & Slocum, 1975; Duncan, 1972; Miller & Bromiley, 1990; Miller & Reuer, 1996; Sharfman & Dean, 1991) has sparked two fruitful streams of literature – the debate on the paradox of risk-return relationship (Bowman, 1980; Fiegenbaum & Thomas, 1988) and the role of environmental uncertainty in contingency theories of organisational structure (Ford & Slocum, 1977; Miles & Snow, 1978), both contributing substantially to management research. A puzzle remains as to why many strategic decisions entail both risk and uncertainty simultaneously (Sanders & Hambrick, 2007) whereas academics claim that risk and uncertainty refer to two mutually exclusive states of the world (Alvarez, Barney, & Anderson, 2013). A common narrative is that decision-making under uncertainty is equivalent of risk-taking (March & Shapira, 1987). Management researchers often jump from one term to the other without explicitly clarifying their conceptual boundaries, or downplay the importance of making a distinction between risk and uncertainty (McMullen & Shepherd, 2006). Although both risk and uncertainty revolve around “unpredictability”, what “unpredictability” brings to the organising processes differs under the conditions of risk and uncertainty, invites disparate responses from actors, and assumes divergent roles in the on-going academic debates. Management disciplines present too many ways of describing risk and uncertainty and not enough theoretical integration (Hambrick, 2005). By teasing out researchers’ idiosyncrasies and discretions, we aim to establish a common means of conceptualisation, consolidate the core knowledge of strategic decision making and maximise the benefits of cross-disciplinary conversation



This chapter reviews the current knowledge and proposes a typology of conceptualisation of risk and uncertainty. We build our conceptualisations on the classics and develop a typology that serves as an analytical structure upon which we can synthesise the contemporary empirical research on how firms and managers behave under risk and uncertainty and why. Drawing upon the works by Knight, Keynes, Popper, and Penrose, we identify two conceptualisations of risk and of uncertainty, ranging from realist to social constructionist perspectives. The theory of risk suggests that as the future is unpredictable, rational actors rely on the calculation of expected values and use “spread” of the potential outcomes to compare “risk” (Janney & Dess, 2006). We contribute to the theory of risk by distinguishing between “risk as frequency” which concerns the deviation from expectation based on a well-defined probability distribution and “risk as propensity” which describes a situation where subjective assessment prevails over historical inference due to scant empirical data. The theory of uncertainty contends that the extent to which individuals perceive future environmental state to be unpredictable is one of uncertainty (Milliken, 1987). We contribute to the theory of uncertainty by distinguishing between “uncertainty as degree of confidence” which refers to the sense of doubt around the risk estimates arising from non-stationary probability distribution and “uncertainty as opportunity creation” which is associated with the unknowable future to be enacted by the decision makers.

Each conceptualisation of risk and uncertainty has spawned distinct research agendas in varied sub-disciplines of management, which may use the same term to describe different states of the world. A comprehensive review of these literatures is conducted to categorise the research agendas and their associated theoretical approaches according to the underlying, often implicit, understanding of risk and uncertainty. It can be seen that different natures of risk and uncertainty are addressed by different theories and are used to study different phenomena. We specify the conditions under which each approach is most relevant. Moreover, we illustrate how researchers’ choice of a conceptualisation may be responsible for theoretical contentions and inconsistent empirical findings. Some lasting empirical puzzles in the literature may be due to

the fact that researchers rely on different conceptualisations of risk and uncertainty when studying the same phenomenon.

In the next section, we discuss how classic literature views risk and uncertainty by presenting the distinction between two conceptualisations of risk and two conceptualisations of uncertainty, followed by the review of contemporary empirical management research. A matrix is established to illustrate the boundary disputes between the conceptualisations and show that addressing the disputes may improve extant research. This chapter concludes with a discussion on the implications of our conceptual integration for future research.

## **2.2 Conceptualising Risk and Uncertainty**

We draw on the seminal works on risk and uncertainty to provide an integrative typology that covers two distinct concepts of risk and two of uncertainty. We argue that the concepts form a “subjectivity” spectrum where one end – “risk as frequency” – is characterised by relatively complete information and objective reality, and the other end – “uncertainty as opportunity creation” – is a notion of complexity and social constructionism. “Risk as propensity” and “uncertainty as degree of confidence” lie in between. Table 1 summarises the conceptualisations and their empirical applications.

### **2.2.1 *Risk as frequency***

Following the philosophical Enlightenment, Western society is dominated by modernist thinking that upholds the pursuit of objective rationality in decision making (Miller, 2009). The tension between rationality and individuals’ inability to precisely predict future environmental states is addressed with probabilistic statements. Individuals are assumed to be able to make rational decisions by maximising expected value with regard to a predetermined goal even in the face of “an uncertain future”.

**Table 1 Conceptualisations of risk and uncertainty in strategic decisions**

	<b>Risk as frequency</b>	<b>Risk as propensity</b>	<b>Uncertainty as degree of confidence</b>	<b>Uncertainty as opportunity creation</b>
<b>Definition</b>	Deviation from the expected value as dictated by the statistical probability of past occurrences	Subjective understanding of the propensity of an event to incur loss, as reflected in the estimated magnitude of loss and probability of loss	Subjective belief on the accuracy of risk estimates	<i>A priori</i> unknown future pathways to be created by actors and endorsed by the others
<b>Origin</b>	Knight (1921)	Popper (1959)	Keynes (1921), Penrose (1959)	Alvarez and Barney (2007); Knight (1921); Sarasvathy (2001)
<b>Quotation</b>	“Empirical evaluation of the frequency of association between predicates, not analysable into varying combinations of equally probable alternatives” (Knight, 1921: 225)	“Singular even <i>a</i> possesses a probability $p(a, b)$ ” owing to the fact that it is an event produced, or selected, in accordance with the generating conditions <i>b</i> , rather than owing to the fact that it is a member of a sequence <i>b</i> .” (Popper, 1959: 34)	“Uncertainty resulting from the feeling that one has too little information leads to a lack of confidence in the soundness of the judgments that lie behind any given plan of action.” (Penrose, 1959: 59)	“There is no valid basis of any kind for classifying instances.” (Knight, 1921: 225);  “Creation theory suggests that the ‘seeds’ of opportunities to produce new products or services do not necessarily lie in previously existing industries or markets.” (Alvarez and Barney, 2007: 15)

	<b>Philosophical stance</b>	Objective realism	Social realism	Social realism	Social constructionism
	<b>Most suited decision contexts</b>	Repeated operational and routine decisions; Decisions based on systematic data analysis	Major, heterogeneous strategic decisions	Major, heterogeneous strategic decisions; Venture formation and other entrepreneurial decisions	Iterative process of action and adaptation
	<b>Empirical research agendas</b>	<ul style="list-style-type: none"> <li>▪ Risk-return paradox;</li> <li>▪ Determinants of organisational risk;</li> <li>▪ Multinationality advantage</li> </ul>	<ul style="list-style-type: none"> <li>▪ Strategic decision making;</li> <li>▪ Risk mitigating strategies;</li> <li>▪ Organisational learning of risk management;</li> <li>▪ Determinants of managerial and firm risk-taking</li> </ul>	<ul style="list-style-type: none"> <li>▪ Strategic decision making;</li> <li>▪ Entrepreneurial decision making</li> <li>▪ Uncertainty mitigation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Entrepreneurial action</li> </ul>
∞	<b>Major theoretical perspectives</b>	<ul style="list-style-type: none"> <li>▪ Portfolio theory</li> <li>▪ Behavioural agency model</li> </ul>	<ul style="list-style-type: none"> <li>▪ Upper-echelon theory;</li> <li>▪ Behavioural decision theory;</li> <li>▪ Organisational learning theory</li> </ul>	<ul style="list-style-type: none"> <li>▪ Entrepreneurial trait theory</li> <li>▪ Opportunity discovery theory of entrepreneurship</li> <li>▪ Transaction cost economics;</li> <li>▪ Real option theory;</li> <li>▪ Organisational learning theory;</li> <li>▪ Neoinstitutional theory</li> </ul>	<ul style="list-style-type: none"> <li>▪ Opportunity creation theory of entrepreneurship</li> <li>▪ Resource based view</li> </ul>

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In economics and management literature, the most influential thinking on risk and uncertainty is provided by Knight (1921). Knight follows the modernist tradition to conceive of risk as measurable probabilities of outcome states. *A priori* probability distribution like coin tossing is practically never met with in business. Instead, Knight uses statistical probability to gauge risk where event instances – or “trials” – can be classified into distinct classes and empirical data obtained to indicate the frequencies of the outcomes of these classes. Although future states cannot be perfectly anticipated, they are drawn from an unobserved, true probability distribution with fixed mean and variance. As the distribution remains stable, more confidence can be placed on the statistical probability as empirical data accumulate over time.

It can be inferred from Knight’s conceptualisation that the environment is real and exogenously given (Miller, 2007), which reflects an objective realism stance in that decision makers seek to work out the objective odds, or relative frequency, of the event, regardless of whether the conditions of the event sequence are ill-defined. Nevertheless, statistical probability is by no means the equivalent of “objective” probability. A common confusion of Knightian bifurcation of risk and uncertainty concerns whether decision makers have subjective probability (LeRoy & Singell, 1987). Given imperfect information about the laws governing the probability, risk assessment will always involve a certain degree of personal judgment in classifying events or instances (Miller, 2007). Which of the instances are sufficiently homogeneous to be grouped together into one class is not so obvious as in the case of *a priori* probability. Statistical probability is derived from the proactive process of data collection, classification and computation, and dependent on the decision maker’s ability to classify past events (Meltzer, 1982). Nevertheless, subjectivity is not the central focus of Knight’s framing of risk. Emphasis has been placed on “the formation of an estimate” rather than “the estimation of its value” (Knight, 1921: 227).

As risk is used to characterise recurring events whose frequency can be known from past occurrence, this understanding of risk is closely related to the frequentist school of

probability, which views probability as “the limit of the relative frequency of an event that can be observed in a large number of trials” (Cabantous & Gond, 2015: 444). Since the whole probability distribution can be easily calculated, attention has been paid to the extent to which future environmental states deviate from expectation. The underlying assumption is that when the real value is relatively predictable, it is more likely for decision makers to attain the expected value. Thus risk is translated into the “spread” of potential outcomes (Janney & Dess, 2006). This interpretation of Knightian risk is widely received and has profound influence on the empirical literature. Despite managing risk being one of the key challenges for managers, it is considered an insignificant issue by Knight’s followers since “spread” can be well accommodated through hedging and insurance (Meltzer 1982).

One approach to addressing the effect of risk on firms’ expansion is to make allowances in the cost and revenue calculation by adjusting downward the estimates of demand or upward the estimates of cost from the values they consider most likely to occur (Penrose, 1959). Alternatively, managers adjust the rate of financial cost to discount the estimated future cash flow generated by capital investment. An implicit assumption underlying dealing with “risk as frequency” is that managers or entrepreneurs are passive “risk bearers” and can do little to reduce the risk they face. Risk bearers simply adjust the resources to be committed to the investment, and risk affects firm expansion the same way as demand and market competition (Wu & Knott, 2006). Whether two otherwise similar managers choose to bear the risk or shy away from it depends on their intrinsic attitude to risk, which is a dispositional trait.

### ***2.2.2 Risk as propensity***

Knight (1921) suggests that as the unobserved distribution of outcomes is stable, the estimated distribution can be modified according to private information and feedback derived from repeated trials (Miller, 2009). Such information is not only inaccessible to outsiders but often tacit in nature (Casson, 1982). Theoretically, each trial generates a set of observations that help illuminate the shape of the distribution curve. Information is only useful when combined

with prior knowledge and data, which form the capacity to make sense of feedback and yield precise estimations (Cohen & Levinthal, 1990). Therefore, risk-taking behaviour evolves as the decision makers uncover the latent distribution with a series of careful experiments.

Despite the far-reaching influence of Knightian risk, it is not without controversy. The nature of many strategic decisions simply does not provide sufficient empirical basis for managers to obtain probability estimates of outcomes (Slattery & Ganster, 2002). Knight's definition of risk as well as the frequency statistics cannot answer the question of how decision makers calculate the probability for the first event of a sequence. Although a stable yet unobserved probability distribution might exist, managers are not always able to draw causal belief from scant historical data to derive a reliable probabilistic account on which rational decisions can be made (March, Sproull, & Tamuz, 1991), especially when managers view the distribution as having a fatter tail rather than being symmetrically bell-shaped (Andriani & McKelvey, 2007).

Both Knightian risk and singular-event risk are empirical in nature (Galavotti, 2015). The tension between those two understandings of probability is one of interpretation. Whether probability represents the possibility of things independent of our knowledge or is shaped by our knowledge is central in this debate (Daston, 1994). More specifically, the two schools of thought diverge on how prior probability distribution should be defined. Scholars point out that real world is replete with one-off events where the frequentist methods of inference based on the repetition of standardised phenomena is to little avail (Liesch, Welch, & Buckley, 2011). For example, the decision to launch radically new products is not based on sampled evidence (Cabantous & Gond, 2015). In such cases, probability is no long the intrinsic property of an event sequence, but rather of an experimental setup that would generate the sequence if reproduced repeatedly. The virtual sequence would contain certain characteristic frequencies as determined by the property of the generating conditions. Popper (1959) thus defines probability

as “propensity” – propensity to generate a specific sequence as seen in experimental arrangements – as opposed to frequency, in order to interpret the probability of singular events.

Dealing with “risk as propensity” does not necessarily equate to following the Bayes’ rule in the sense that equal probability should be assigned to every possible *a priori* event under conditions of ignorance (Cabantous & Gond, 2015). In contrast, “risk as propensity” reflects a social realism stance in that decision makers’ conjecture of the generating conditions to which they attribute their probability estimates is infused with a strong sense of subjectivity and great reliance on judgment. This is because, as suggested by the behavioural decision theory, managers refuse to be identified with gamblers, who are faced with predetermined, exogenous odds (March & Shapira, 1987). They rather believe that riskiness of a choice in managerial situations can be controlled and reduced to an acceptable level thanks to their skills, talents and capabilities (Chatterjee & Hambrick, 2011; McCrimmon & Wehrung, 1986). There are ways open to the managers to transfer some of the managerial resources to dealing with risk (Penrose, 1959). Only when those resources that could have been used to reduce risk are fully committed can we claim that risk becomes the final hurdle to firm expansion. Therefore, managers’ perception about their own ability contributes heavily to the understanding of the influence of risk.

The switch of focus from well-specified distribution toward subjective probability has profound implications. Just as expected utility does not exist “out there”, probability now becomes a less measurable entity in the minds of individual managers, who feel it instead of quantifying it (March & Shapira, 1987). The number of alternatives and interrelationships makes the risk situation mentally too demanding to be computationally tractable (Maitland & Sammartino, 2015a). Even if a range of probabilities could be estimated, the second-order probability of any point within that range might remain unknown (March & Shapira, 1987). Specifying the whole distribution now requires substantial amounts of cognitive capacity upon which managers seek to economise (Simon, 1955). Thus attention has been directed away from



depicting the whole distribution toward the probability of attaining a value below a subjectively expected minimum (Penrose, 1959). The “loss” may or may not be a monetary one; it could be a failure of achieving a pre-set corporate goal (Aharoni, 1966). Moreover, since subjective probability is much more difficult to estimate than frequency, the potential magnitude of loss is elevated to great importance to managers if a negative outcome were to occur (March & Shapira, 1987). A risky choice is one that could possibly incur a huge loss (Forlani, Parthasarathy, & Keaveney, 2008), and often referred to as threat, danger or hazard (Gephart, Van Maanen, & Oberlechner, 2009). A simple example is a firm putting 10% and 30% of cash reserve to the same investment plan. Although the chance of failure is exactly the same, they may pose substantially different risk to the firm as losing 30% of reserve could endanger its financial position as a whole (Penrose, 1959). Each increment of investment increases the risk a firm has to bear, holding the chance of loss constant, and this so-called “principle of increasing risk” limits a firm’s ability to expand its investment (Kalecki, 1937). The focus on the magnitude of loss is particularly germane to entrepreneurs who expose their personal wealth to the possible financial distress of the ventures as well as managers who expose career reputation and employment compensation to the investments. In management research, certain topics (e.g., new venture *vs.* foreign expansion) and actors (e.g., first-movers *vs.* latecomers) might be more closely related to the magnitude of loss than the probability of loss, and vice versa (Janney & Dess, 2006; Mullins & Forlani, 2005).

### **2.2.3 *Uncertainty as degree of confidence***

Knight (1921: 225) uses uncertainty to refer to unknowable probabilities and outcome states, a situation lacking “valid basis of any kind” for formulating a probability distribution. The reason is that each instance seems to be too dissimilar for decision makers to make a classification for the assessment of frequency. Under uncertainty, calculations of expected values are unfounded so that rational decision makers would either make efforts to reduce it to risk, or refuse to take action altogether (Dixit, 1989). In other words, the distinction between risk and uncertainty is not immutable and “a matter of degree only” (Knight, 1921: 225). Rather

than just following “animal spirits” (Keynes, 1936), decision makers can learn to make classifications.

Knight’s bifurcation of risk and uncertainty has a wide influence on how management research defines uncertainty (Downey, Hellriegel, & Slocum, 1975; Duncan, 1972). It seems that uncertainty refers to a qualitative state distinct from measurable, quantitative risk. For example, Ghosh and Ray (1992) explicitly differentiate unambiguous uncertainty and ambiguity, the former being risk. The latter, synonymous with uncertainty, refers to the state in which individuals are unable to specify appropriate probability distribution for a given decision option due to lack of information. For Milliken (1987), risk is concerned with known probabilities of outcomes whereas uncertainty is related to probabilities that are not knowable at all.

However, the familiar notion of “unknowable unknown” is not the entire meaning of uncertainty (Casson, 1982; Milliken, 1987). Many view uncertainty as inextricable from the prediction of future outcomes. Keynes (1921) uses “weight” to describe uncertainty in that decision makers would place the lowest weight on the probability assigned to a particular outcome when they have little confidence in their ability to classify the instances giving rise to the outcome. An event that is almost certain to occur would receive a high weight on a very low probability (Meltzer, 1982). Put differently, uncertainty might have no effect on risk since holding the risk assessment constant, there could be a continuum of uncertainty perceived by different individuals ranging from complete ignorance to near certainty (Penrose, 1959). Classifying together the heterogeneous instances based on personal judgment gives rise to the sense of doubt, unreliability and anxiety, which weighs on managers’ mind (Casson, 1982). Uncertainty is thus defined as the degree of confidence in the correctness of subjective probabilities (Penrose, 1959), and as a matter of individual perception (Lipshitz & Strauss, 1997; Milliken, 1987; Shepherd, Williams, & Patzelt, 2015). Similarly, decision theorists direct attention from viewing risk and uncertainty as two distinct states toward understanding the

interaction between them. Sarin and Weber (1993) find experimental evidence that ambiguity leads to psychological discomfort of the decision maker, thereby raising the perceived risk and affecting decision choices. Kahn and Sarin (1988) suggest that the influence of risk is accentuated in the presence of ambiguity when it comes to formal investment evaluation involving new technology. Conceptualising uncertainty as a sense of doubt that qualifies personal belief and blocks action is also well received in the entrepreneurship and organisation literature (Lipshitz & Strauss, 1997; McMullen & Shepherd, 2006). A general consensus is that “different individuals may experience different doubts in identical situations” (Lipshitz & Strauss, 1997: 150). Ultimately, “uncertainty as degree of confidence” reflects a social realism stance in that decision makers are bounded by information insufficiency and limited cognitive capacity when evaluating the accuracy of probability estimates regarding the frequency of the event or its propensities.

Then the question is posed as to why would decision makers become unable to classify the instances, or in other words, lose confidence in their prediction? Arrow (1974) argues that under Knightian uncertainty, individuals do not have faith in the description of the world in terms of a single probability distribution but rather consider it to be represented by one or another range of states. Each range of states represents a complete, stand-alone distribution. Uncertainty exists in that individuals do not know which range of states is true, and the true probability distribution may not be stable and could switch from one range of states to another. In this case, one has every reason to doubt if an instance similar to some previous ones can be classified into that group. As outcomes randomly deviate from a *non-stationary* trend, a diversified portfolio of investments can no longer accommodate the deviation or yield a predictable return (Meltzer, 1982).

A prominent reason for the mean and variance of the probability distribution to change is environmental dynamism (Dess & Beard, 1984; Teece & Pisano, 1994). Environmental dynamism makes it difficult for managers to predict not only the state of the environment, but

also the effect of the environmental change on organisational success or failure (Milliken, 1987) and the organisational consequence of a specific action under new environment (Duncan, 1972). Examples include a dramatic shift in consumer preference after a new technology is introduced, and a major change in competitive landscape when an established technology breeds business model innovation. Environmental dynamism creates a systematic and a random component of uncertainty (Figueira-de-Lemos, Johanson, & Vahlne, 2011). Arising from the stochastic acts of nature, the random component is inherently unpredictable and can count as “noise”. Even the systematic component is too “surprising” for boundedly rational individuals to predict based on past stationary distributions. However, environmental volatility does not just bring “non-controllable disturbances” to transactions (Williamson, 1985: 58); it also creates a constant flow of new opportunities for entrepreneurs to reallocate resources (Alvarez, Godley, & Wright, 2014; Casson, 1982). It is rewarding to forecast correctly even just the direction of change (Meltzer, 1982). The potential economic profit incentivises entrepreneurs to learn how to interpret current events and adapt to environmental changes (Miller, 2007). While the estimation of risk determines the attractiveness of each decision option, whether managers will make risky decisions at all is predicated on the perceived uncertainty that makes risk estimation possible and this perception is widely considered a function of “local” knowledge (McMullen & Shepherd, 2006).

#### ***2.2.4 Uncertainty as opportunity creation***

Uncertainty plays an important role in most theories of entrepreneurship (McMullen & Shepherd, 2006). Yet the conceptualisation of uncertainty is not uniform, and exactly what role uncertainty plays depends on the theory employed. There are two worldviews on entrepreneurial opportunity. In discovery theory (Alvarez & Barney, 2007) or causation theory (Sarasvathy, 2001), opportunity is assumed to be an objective reality to be discovered by unusually alert entrepreneurs while uncertainty is viewed as “doubt” – more specifically hesitancy, indecisiveness, and procrastination (McMullen & Shepherd, 2006) – that prevents entrepreneurs from acting to seize the opportunity (Casson, 1982). Often, doubt arises from exogenous

environmental volatility that potentially disrupts the competitive equilibrium - such as changes in technology, consumer preference, political and regulatory institutions and social demographics (Kirzner, 1973; Shane, 2003). This is consistent with our notion “uncertainty as degree of confidence”, and the uncertainty here does not depart from that in the transaction cost economics or other organisational theories.

In creation (Alvarez & Barney, 2007) or effectuation theory (Sarasvathy, 2001), opportunity does not exist “out there” and needs to be created endogenously by the entrepreneurs, who act, react or enact to build a market for a new product or service (Baker & Nelson, 2005; Gartner, 1985). Such actions can be either deliberate or “blind” at the beginning of the process, but in reality is most often myopic. Entrepreneurs may start with a blind, accidental variation from the well-defined path and follow on from the prior belief about a new market (Alvarez & Barney, 2007). This belief becomes part of the context in which future behaviour is understood and enacted, and the behaviour reshapes the context over time (Weick, 1979). Therefore, “uncertainty as opportunity creation” reflects a social constructionism stance in that opportunities do not exist independent of decision makers’ perceptions and beliefs, which themselves may change as the enactment process proceeds. Moreover, entrepreneurs may be wrong about the prospects of the market and could misinterpret the market response to previous actions. For an enacted opportunity to be able to generate economic wealth, the initial beliefs and following interpretations have to be put up for test against the collective social constructions, i.e. market demand (Campbell, 1960). After rounds of iterative actions, evaluations and adjustments, entrepreneurs may finally manage to create a “vision” that is either well received by others or influence the social constructions of others, including customers and suppliers (Alvarez, Barney, & Anderson, 2013). What the end product would be – the social construction built by the entrepreneur – is unknown at the beginning of the creation process. Neither is the extent to which the social construction would be accepted by others.

In this regard, the process of opportunity creation is path-dependent and implies a source of competitive advantage as a small difference in choices, knowledge or interpretations of results in the beginning between two otherwise similar entrepreneurs may lead to dramatically different, costly-to-copy opportunities at the end (Arthur, 1989). Given that entrepreneurs can take on various paths through the creation process, it is not possible – at the point a decision to form an opportunity is made – to predict the outcomes *ex-ante* or base entrepreneurial decisions on such predictions. One cannot see “the end from the beginning” because there is simply no “end” until the opportunity is fully enacted. In Alvarez and Barney’s (2007: 17) words, “it is not possible to measure the height of a mountain that has not yet been created”. This notion may be a new understanding of uncertainty from the conventional focus on information incompleteness or entrepreneurs’ cognitive capacity, yet it does not depart far from the “unknowable unknown” delineated by Knight (1921).

### **2.3 Empirical Applications of the Risk and Uncertainty Concepts**

In this section, we survey the contemporary management literature and identify how different conceptualisations of risk and uncertainty have spawned different research agendas. We focus on empirical studies because we are interested in how researchers have applied the conceptualisations, explicitly or implicitly, to study the way in which firms and managers behave under risk and uncertainty in strategic decision making. We searched for “risk”, “uncertainty”, and “ambiguity” in the abstracts of major empirical management journals. We restrict our survey to the studies with clear and direct relevance to strategic or entrepreneurial decision making. In total, we identified 113 articles across six 4\* management, strategy and IB journals and three grade 4 entrepreneurship journals, as classified in the Association of Business Schools’ Academic Journal Guide 2015. Using thematic analysis, we incorporate each article into our discussion of the empirical research streams associated with the four conceptualisations according to its theoretical foundation and treatment of risk and uncertainty, and manually count

the articles that fall into each of the four categories. Table 2 presents a breakdown of the number of articles by journal and discipline<sup>1</sup>.

### **2.3.1 Frequency and risk-bearing**

A “risk as frequency” conceptualisation is important in strategic decision making when the possible outcomes associated with a new investment and the probability of these outcomes are known *a priori* and thus present value calculation is feasible. But this is often not the case. Therefore, much of the attention in the literature has been paid to the variability of return as a manifestation of risk (Arrow, 1965; Fisher & Hall, 1969) as historical data on the distribution of returns allow for the calculation of frequency. Empirical research predominantly measures risk by the chance of reaching outcomes away from the expected return, i.e., their historical mean (Armour & Teece, 1978). In finance theory, as investors can presumably enter and exit financial market at little cost, any unsystematic variance from stock return can be arbitrated away in a fully diversified portfolio. What matters is the non-diversifiable, systematic component of risk, reflected in the covariance between stock return and the return of market portfolio (Fama & Miller, 1972). The strategy literature mostly employs the simple variance of the accounting returns to measure organisational risk or so-called “income stream uncertainty” in empirical research (Baird & Thomas, 1985; Miller & Bromiley, 1990). An implicit premise is that organisational risk is different from project level risk that can be fully diversified according to modern capital market theory (Miller, 2009). But the portfolio theory legacy still plays an important role as firms having more variable return are undoubtedly characterised as risky *ex post*.

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<sup>1</sup> Journals include *Academy of Management Journal*, *Strategic Management Journal*, *Organisation Science*, *Administrative Science Quarterly*, *Journal of Management*, *Journal of International Business Studies*, *Journal of Business Venturing*, *Entrepreneurship Theory and Practice*, and *Strategic Entrepreneurship Journal*.

**Table 2 Number of articles per journal and discipline**

	<b>Frequency</b>	<b>Propensity</b>	<b>Degree of confidence</b>	<b>Opportunity creation</b>	<b>Overall</b>
AMJ	7	13	3	0	23
SMJ	8	8	17	0	33
OS	1	3	9	0	13
ASQ	0	3	3	0	6
JOM	3	5	0	0	8
JIBS	3	1	3	0	7
JBV	1	5	4	3	13
ETP	0	5	2	0	7
SEJ	0	1	1	1	3
<b>Overall</b>	<b>23</b>	<b>44</b>	<b>42</b>	<b>4</b>	<b>113</b>
Strategy	15	25	23	0	63
IB	7	10	12	0	29
Entrepreneurship	1	9	7	4	21

While “risk as frequency” fits perfectly with financial decisions maximising risk-adjusted return and has contributed to the strategy literature on the risk-return paradox (Henkel, 2009; McNamara & Bromiley, 1999; Ruefli, 1990), this definition may be misleading if researchers intend to infer the *ex-ante* influence of risk on strategic decision making from *ex-post*, after-equilibrium firm behaviour. For instance, early IB research takes a portfolio investment approach to foreign direct investment where each project in one country constitutes an investment in the firm’s portfolio and the return variability shared by projects in every country represents the systematic risk. As researchers observe a negative relationship between stability of earnings and foreign operations, it was argued that the decision to invest abroad is motivated by a risk reduction advantage of multinational enterprises (MNEs) over non-MNEs as the former can diversify sales in various national economies (Rugman, 1976). However, later research suggests that international diversification is more likely to be driven by other motives than an intention to reduce risk (Buckley, 1988; Caves, 1996), and firms cannot always realise risk reducing advantages by diversifying to multiple countries (Belderbos, Tong, & Wu, 2014;



Kwok & Reeb, 2000). Corporate risk-taking research shows that using different risk measures imposed by the researchers leads to qualitatively different relationships between risk and return (McNamara & Bromiley, 1999; Miller & Bromiley, 1990; Wiseman & Catanach, 1997). The same caution needs to be exercised in the strategic decision context. When the downside risk measure is used – one incorporating both variability and loss (Baird & Thomas, 1985; Miller & Bromiley, 1990; Miller & Leiblein, 1996; Miller & Reuer, 1996), it is found that multinationality is no longer related to organisational risk while engaging in international joint ventures even increases risk (Reuer & Leiblein, 2000). It is reasoned that multinational operations may incur additional risk like exchange risk, political risk and information asymmetry that offset the benefit of diversification (Reeb, Kwok, & Baek, 1998).

Variance of projected rates of return count as *ex-ante* risk is assumed rather than tested (Eisenmann, 2002; McNamara & Bromiley, 1999; Miller & Chen, 2004). IB researchers, for instance, have taken a leap of faith in assuming that adjusting the required return or cost of capital reflects the way MNE managers treat country risk in reality. When what concerns managers does not conform to the researcher's *post hoc* rationalisation of firm behaviour (McNamara & Bromiley, 1997), "risk as frequency" may be of limited relevance in the context of strategic decision making (Miller & Reuer, 1996; Ruefli, Collins, & Lacugna, 1999).

One line of inquiry discussing the *ex-ante* role of "risk as frequency" employs agency theory and the behavioural agency model to explain how managers' risk bearing, i.e. perceived wealth at risk, affects strategic decisions (Wiseman & Gomez-Mejia, 1998). Strategy research generally agrees that managers deliberately make risky strategic choices on resource allocation to align their organisations with the environmental conditions (Palmer & Wiseman, 1999), which in turn influences performance volatility (Miller & Friesen, 1980). Fundamental to the agency literature is the assumption that much of managers' career prospect, reputation and personal wealth are exposed to the firms' performance and stock price volatility and thus their own strategic choices (Larraza-Kintana, Wiseman, Gomez-Mejia, & Welbourne, 2007; Latham

& Braun, 2009). Managers' compensation arrangements (Gray & Cannella, 1997) and stock options (Deutsch, Keil, & Laamanen, 2011; Ellstrand, Tihanyi, & Johnson, 2002; Martin, Gomez-Mejia, & Wiseman, 2013; Sanders, 2001; Sanders & Hambrick, 2007; Wright, Kroll, Krug, & Pettus, 2007; Wright, Kroll, Lado, & Van Ness, 2002), insider owners' wealth portfolio (Wright, Ferris, Sarin, & Awasthi, 1996), boards with more insiders or led by CEO (Ellstrand, Tihanyi, & Johnson, 2002) and institutional equity ownership (George, Wiklund, & Zahra, 2005; Wright, Kroll, Krug, & Pettus, 2007) all encourage strategic risk-taking, whilst family ownership and managerial equity holding and discourage risky decisions (Alessandri & Seth, 2014; Block, 2012; George, Wiklund, & Zahra, 2005; Martin, Gomez-Mejia, & Wiseman, 2013; Matta & Beamish, 2008; Wright, Kroll, Lado, & Van Ness, 2002). The latter relationship is moderated by corporate governance structure (Lim, 2015), managers' dispositional risk preference (Gray & Cannella, 1997), cash-based compensation (Devers, McNamara, Wiseman, & Arrfelt, 2008), hedging ability and vulnerability to dismissal (Martin, Gomez-Mejia, & Wiseman, 2013), may differ with the specific forms of equity-based pay (Devers, McNamara, Wiseman, & Arrfelt, 2008) and may also be curvilinear in nature (Wright, Kroll, Krug, & Pettus, 2007).

### **2.3.2 Propensity and risk-taking**

“Risk as propensity” cannot be calculated from past evidence and has a clear forward-looking orientation. It concerns primarily the upcoming risk that managers or entrepreneurs are to take when making strategic decisions or launching new ventures.

In strategy research, managers are generally assumed to be unwilling to make risky strategic choices regardless of how risk is operationalised – be it new products, R&D investment, capital expenditure, merges and acquisitions (M&As), expanding to high-risk countries or even corporate tax avoidance (Christensen, Dhaliwal, Boivie, & Graffin, 2015). Consistent evidence reveals that environmental risk negatively affects various investment decisions, including market entry (Rothaermel, Kotha, & Steensma, 2006), location choice

(Garcia-Canal & Guillén, 2008; Holburn & Zelner, 2010; Oh & Oetzel, 2011), resource commitment (Delios & Henisz, 2000; Khoury, Junkunc, & Mingo, 2015) and mode of market entry (Parker & van Praag, 2012).

Despite such agreement, heterogeneous propensities for risk-taking have been observed. Two broad explanations have been provided. First, some firms have a stronger ability to manage risk than others. Despite having no frequency data to calculate the probability distribution regarding foreign expansion, international new ventures can balance out the revenue exposure, country risk and entry mode commitment in each country to keep the overall risk acceptable (Shrader, Oviatt, & McDougall, 2000). Firms can also design effective defence mechanisms to protect their resources from partners' misappropriation (Katila, Rosenberger, & Eisenhardt, 2008), use non-competition agreements to contain knowledge leakage to competitors (Conti, 2014), and increase the extent of foreign subsidiaries' within-firm sales to reduce the impact of host country's discretionary policy change (Feinberg & Gupta, 2009). Experienced firms can utilise their "non-market" knowledge and capabilities generated from operating in politically risky countries to overcome the threat of similar risks in other countries (Delios & Henisz, 2000; Delios & Henisz, 2003a; Delios & Henisz, 2003b; Holburn & Zelner, 2010). Such experiential learning also helps incumbent firms to expand in the countries suffering high-impact natural and technological disasters as well as terrorist attacks (Oetzel & Oh, 2014).

Second, some firms have a stronger tendency to take risk than others. An intuitive explanation is centred on managers' dispositional risk preference and cognitive ability (Wally & Baum, 1994). Yet the trait approach receives mixed support, not least in the entrepreneurship literature (Block, Thurik, van der Zwan, & Walter, 2013; Busenitz & Barney, 1997; Dai, Maksimov, Gilbert, & Fernhaber, 2014; Miner & Raju, 2004; Palich & Bagby, 1995; Stewart & Roth, 2001). Upper-echelon research suggests that fund source (Mullins & Forlani, 2005), firm's reputation (Petkova, Wadhwa, Yao, & Jain, 2014), managers' political orientation (Christensen, Dhaliwal, Boivie, & Graffin, 2015), CEO narcissism and overconfidence

(Chatterjee & Hambrick, 2011; Li & Tang, 2010; Simon & Houghton, 2003; Simon & Shrader, 2012; Zhu & Chen, 2015, 2014), CEOs' social class origin (Kish-Gephart & Campbell, 2015) and emotion (Foo, 2011; Podoyntsyna, Van der Bij, & Song, 2012; Stanley, 2010) influence strategic risk-taking. Following prospect theory and behavioural decision theory (March & Shapira, 1992), strategy research examines how and the extent to which managers depart from normative decision rules (McNamara & Bromiley, 1997). An array of studies have tested the contextual influences on firms' risk-taking, including resource slack (Bromiley, 1991; Greve, 2003; Singh, 1986; Wiseman & Bromiley, 1996), attainment discrepancy (Palmer & Wiseman, 1999), and performance feedback (Sitkin & Weingart, 1995; Taylor, Hall, Cosier, & Goodwin, 1996). Nevertheless, applying behavioural decision theory to the strategic decision context has led to equivocal results (see the review by Holmes, Bromiley, Devers, Holcomb, & McGuire, 2011). The "house money" thesis and prospect theory put forth opposing predictions on risk-taking under prior success (Thaler & Johnson, 1990). Slattery and Ganster (2002) simulate a realistic decision task featuring uncertain outcomes and find that poor performance induces individuals to set less risky goals in subsequent decisions, as opposed to problemistic and increased risk-taking predicted by prospect theory (Ketchen & Palmer, 1999). This finding is aligned with the "risk as propensity" conceptualisation that managers take into account their own abilities when making risky decisions (March & Shapira, 1987). Those who have positive experience with risk-taking tend to view a risky strategic action, e.g. disruptive business model innovation, as more of an opportunity than threat (Dewald & Bowen, 2010; Osiyevskyy & Dewald, 2015). Contingency explanations have also been offered to reconcile the mixed findings; for instance, the relationship between attainment discrepancy and risk-taking may be reversed depending on organisational learning, legitimacy and inertia (Desai, 2008).

### **2.3.3 *Confidence and uncertainty-mitigation***

Uncertainty as degree of confidence is well used in organisation and entrepreneurship literature. McMullen and Shepherd (2006: 135) conclude that "uncertainty' can be viewed as a sense of 'doubt' that is inextricable from the beliefs that produce action". Most of the discussion

about such uncertainty focuses on external and non-controllable volatility – particularly the resolution of technology and changing market conditions (Bergh & Lawless, 1998; Downey, Hellriegel, & Slocum, 1975; Duncan, 1972), and its impact on organisations (McKelvie, Haynie, & Gustavsson, 2011). Nevertheless, any factors giving rise to the sense of doubt on predicting and managing risk can be treated as contributors to uncertainty (Håkanson & Ambos, 2010), which may, or may not, be environmental characteristics.

Following Penrose (1959), entrepreneurship studies have focused on two accounts of how entrepreneurs overcome the sense of doubt to pursue business opportunities in the face of substantial uncertainty. First, entrepreneurial traits distinguish them from the rest and distinguish one entrepreneur from another. For example, entrepreneurs are more inclined than non-entrepreneurs to rely on cognitive biases and heuristics such as overconfidence and representativeness – a simplifying decision style particularly effective under the conditions of uncertain and complex environment (Busenitz & Barney, 1997). Regulatory focus influences entrepreneurs' ability to exploit opportunities in dynamic industries (Hmieleski & Baron, 2008). Second, entrepreneurs address insufficient information about future events in various ways. Although prior knowledge does not allow for the calculation of probability distribution under uncertainty, it nevertheless stands as an important source of information that can boost confidence in entrepreneurs' judgments about which market to enter and how to serve the market (Shane, 2000). Uncertainty may obscure the fit between entrepreneurs' prior knowledge and a particular venture idea, thus inhibiting the discovery of opportunity (Patel & Fiet, 2009). Systematic research of known information sources, including peers at university (Kacperczyk, 2012), rather than accidental recognition of unknown venture ideas can moderate the effect of environmental uncertainty (Patel & Fiet, 2009). Parker (2006) finds an interaction between the trait and information perspective in that older and younger entrepreneurs adjust prior beliefs differently in the light of new information.

Strategy and IB research focuses on how firms respond to environmental uncertainty in strategic decisions or, put differently, how uncertainty can be mitigated through various strategies. Prominent examples include real option and hierarchical governance. A real option is a set of short term projects, including R&D, alliances and foreign direct investment, that can easily change when environment changes (Girotra, Terwiesch, & Ulrich, 2007; McGrath & Nerkar, 2004; Vassolo, Anand, & Folta, 2004). The general argument is that firms will delay investment (or divestment) decisions and, if deciding to invest (or divest), will delay full commitment (or complete divestment) until the uncertainty resolves favourably (or unfavourably) (Damaraju, Barney, & Makhija, 2015). When the chance of loss is less for the portfolio of investments as a whole than for any part of it, firms do not need to withdraw from an underperforming investment as long as it maintains a switch option value (Belderbos & Zou, 2009). This value depends on the correlation between the focal investment and other investments in the portfolio (Girotra, Terwiesch, & Ulrich, 2007; Li & Chi, 2013; Vassolo, Anand, & Folta, 2004). Under uncertainty, holding a diversified portfolio increases information sources about market demand (Sorenson, 2000) and spreads the bets on unproven innovations (Klingebiel & Rammer, 2014). The flexibility also benefits discrete investments (Folta & Miller, 2002; Miller & Folta, 2002); for example the growth option allows multinational firms to shift gradually to net present value based decision making under the receding perception of uncertainty (Fisch, 2008b).

Hierarchical governance follows from the transaction cost economics, which argues that uncertainty reduces firms' ability to manage subsidiaries efficiently and can be accommodated by managerial fiat (Williamson, 1991). Empirical findings so far have been mixed (David & Han, 2004) and suggest that this prediction may differ depending on the type of uncertainty and the characteristics of the firms (Sutcliffe & Zaheer, 1998). In industries with high technological uncertainty and complexity, alliance may be favoured over hierarchical governance (Dyer, 1996; Osborn & Baughn, 1990). Industrial deregulation and regulatory uncertainty may increase the efficiency of both vertical integration and market transaction, but not the hybrid structure

(Delmas & Tokat, 2005). Market, technological and behavioural uncertainty point to divergent theoretical predictions on governance mode (Luo, 2002; Robertson & Gatignon, 1998). Highly diversified and less diversified firms respond to uncertainty in opposite fashion in terms of acquisition and divestiture (Bergh & Lawless, 1998). Interestingly, under technological uncertainty, firms may face a trade-off between the value of the growth option associated with low commitment structures and the efficiency gain derived from hierarchical governance (Folta, 1998). Combining these two explanations, one might argue that the predictive power of real option theory is stronger in the case of technological or exogenous uncertainty while transaction cost logic prevails under behavioural or endogenous uncertainty (Santoro & McGill, 2005; van de Vrande, Vanhaverbeke, & Duysters, 2009).

Another stream of literature concerns how imitative strategies help firms enter new markets in the light of firm-specific uncertainty (Beckman, Haunschild, & Damon, 2004; Gaba & Terlaak, 2013) about organisational legitimacy and economic feasibility (Belderbos, Olffen, & Zou, 2011). Neoinstitutional theory and organisational learning theory suggest that in markets with high level of environmental uncertainty, firms tend to imitate the investment behaviour – including foreign expansion, location choice, entry mode and partner selection – of their own (Chan, Makino, & Isobe, 2006). Alternatively, they choose to imitate the investment behaviour of peer organisations a) with similar characteristics, b) having certain traits, c) having repeated investments in the target market, d) showing desirable outcomes, e) from the same home country, f) from the same prior industry, g) from the same business group, or h) competing with the focal firm in other markets (Belderbos, Olffen, & Zou, 2011; Benner & Tripsas, 2012; Fernhaber & Li, 2010; Gimeno, Hoskisson, Beal, & Wan, 2005; Greve, 1998; Guillén, 2002; Haunschild & Miner, 1997; Henisz & Delios, 2001; Li, Qian, & Yao, 2015; McDonald & Westphal, 2003; Stephan, Murmann, Boeker, & Goodstein, 2003). Again, firms' responses to uncertainty differ depending on the extent to which they can control it (Beckman, Haunschild, & Damon, 2004). For example, firms tend to proactively reduce the uncertainty around the resolution of technology by advancing its own technology and pre-empting the competition

against rivals (Toh & Kim, 2012). When the uncertainty is shared across a group of firms over which any of them have little control, they will reinforce the existing practices to retain legitimacy (Beckman, Haunschild, & Damon, 2004). Moreover, the predictive power of different theories may depend on the level of uncertainty. As uncertainty grows from low, medium to high, firms base partner selection on technical capability, prior relationship and internalisation advantage respectively (Hoetker, 2005).

#### **2.3.4 *Opportunity creation and uncertainty-building***

The opportunity creation view and the associated understanding of uncertainty are in a nascent state. It contends that entrepreneurs endogenously generate uncertainty in order to amplify the initial small differences to the rivals, create costly-to-copy, heterogeneous resources, and enact opportunities others cannot conceive (Alvarez & Barney, 2007). In this case, uncertainty is no longer a barrier to investment, and may even become the source of sustainable competitive advantage. We can see corroborating evidence emerging. For example, it is found that expert entrepreneurs focus more on “affordable loss”, perceive different possible courses of actions and favour more strongly non-predictive control than novices, who seek to predict the future and avoid “surprises” (Dew, Read, Sarasvathy, & Wiltbank, 2009; Read, Dew, Sarasvathy, Song, & Wiltbank, 2009). Wiltbank, Read, Dew, and Sarasvathy (2009) report that angel investors who rely on non-predictive control strategies and seek to transform the environment in which they operate tend to make small investments in the ventures and experience fewer failures than those who employ prediction-based approaches and pursue preconceived goals. Chandler, DeTienne, McKelvie, and Mumford (2011) confirm that uncertainty is positively associated with entrepreneurs using experimentation and negatively with causation processes. Ventures that simultaneously develop diverging search paths of business models from an initial idea may have higher odds for long-term survival than those focusing commitment on a single business model (Andries, Debackere, & van Looy, 2013). Nevertheless, management literature so far is lacking systematic examination of how

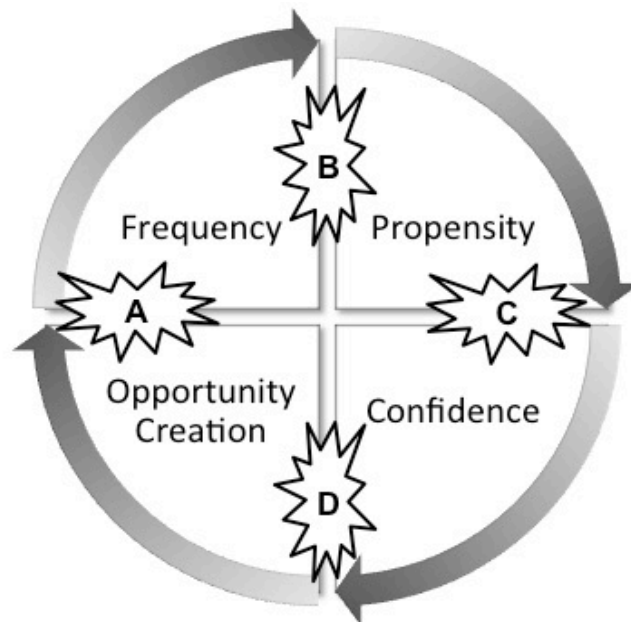


entrepreneurs utilise experimentation to exploit uncertainty and how they benefit from creating uncertainty, above and beyond a real option explanation.

## 2.4 Fitting Conceptualisations with Empirical Questions

Contention arises when empirical research attempts to span the boundaries of neighbouring risk or uncertainty cells and relies on different concepts to address the same research question. We discuss the four boundaries respectively and emphasis opportunities for future research.

**Figure 1 Spanning the boundaries: Contested views and opportunities for future research**



### 2.4.1 A) Entrepreneur – risk bearing or uncertainty bearing?

Entrepreneurship literature provides two major explanations of what distinguish entrepreneurs from non-entrepreneurs, depending on the nature of entrepreneurial opportunity in the eyes of the researchers. On the one hand, entrepreneurs are believed to have a stronger intrinsic inclination to risk as entrepreneurial action is theorised as an opportunity discovery process (Brockhaus, 1980; Stewart & Roth, 2001). On the other hand, entrepreneurs are arguably more willing to bear the uncertainty in the process of opportunity creation in pursuit of

economic profit (Knight, 1921). Alvarez and Barney (2007) point out that one can always interpret *ex post* the formation of an opportunity as resulting from either discovery or creation. Linking the system-level outcome to the actors' characteristics may unwittingly impose the observers' assessment of the novelty of the situation on the actors (McMullen & Shepherd, 2006). There are certainly cases where an activity occurs on a personal knowledge frontier – i.e. new to the entrepreneur, but appear to researchers as an incremental improvement or just imitation.

It is the entrepreneurs' perception about the situation that determines the actions they are to take, and the situation being risky or uncertain has different implications. Under conditions of risk, an entrepreneurial actor would employ present value and scenario-based techniques to plan everything ahead and then bear the risk that the outcome may not occur as expected (Alvarez & Barney, 2005). Under uncertainty, entrepreneurs would rely heavily on judgment and emphasise flexibility by keeping the options open to exploit the contingencies. Yet it is the assumption held by the researchers that determines the way they theorise about the observed behaviour and where they attribute its cause. The mismatch between the researchers' assumption and that in the minds of the actors *ex ante* may be one reason why actors' intrinsic tolerance for risk cannot consistently explain venture formation decisions (Simon, Houghton, & Aquino, 2000) or distinguish entrepreneurs from managers (Busenitz & Barney, 1997; Low & MacMillan, 1988; Miner & Raju, 2004). The trait approach may only be supported when the experimental setting stimulates an opportunity discovery, risk-bearing environment (Mullins & Forlani, 2005).

One way to reconcile the findings is to focus on the actual actions entrepreneurs take through the process of enterprising. Their underlying beliefs about the nature of the situation will be manifest in the decision tools or cognitive processes being applied (Sarasvathy, 2001). Systematic information search and analysis implies the assumption that future is relatively measurable and there is an existing opportunity to be discovered. Experimental and iterative

learning implies the assumption that the future is to be created. Whether the hypothesis is congruent with the real context in which entrepreneurs are operating is another question and may have implications for ventures' financial performance (Alvarez & Barney, 2007). But only when the explanation of the determinants of entrepreneurship is built on correct assumptions would the research lead to convergent, meaningful findings.

#### **2.4.2 B) Risk bearing and risk-taking – inadequate interaction**

There is a notable clash between behavioural agency model and agency theory in that the former focuses on how managerial equity and option holding increases risk bearing and thus the tendency to avoid risky behaviour (Wiseman & Gomez-Mejia, 1998) while the latter discusses how equity-based compensation aligns managerial interests with the principals' so as to encourage risk-taking (Jensen & Meckling, 1976). Mixed support of the broad "agency theory" has been reported as risk-bearing and incentive-alignment argument concerns either the gain or the loss consequences of a gamble and provides opposing theoretical predictions (Alessandri & Seth, 2014; Beatty & Zajac, 1994; Sanders, 2001). Contention arises as to whether the passive bearing of risk or proactive taking of risk better explains the agency phenomenon. A plausible yet unaddressed explanation lies in what kinds of decisions can count as "risky". Whether R&D investment or diversification is a risk-laden or risk-reducing choice depends on where the risk arises from, which may vary for different agents in a multi-agent model (Alessandri & Seth, 2014; Miller, Le Breton-Miller, & Lester, 2010). Compensation volatility and perceived loss of wealth have different implications for risk bearing and, if undistinguished, may result in positive or negative confirmation of the agency theory (Larrazza-Kintana, Wiseman, Gomez-Mejia, & Welbourne, 2007).

An alternative approach concerns the interaction between risk bearing and risk-taking perspectives. Previous empirical studies contribute to theoretical refinement by examining the interaction between behavioural agency model and agency theory (Martin, Gomez-Mejia, & Wiseman, 2013) and between agency theory and behavioural decision theory (Lim, 2015; Lim

& McCann, 2013a, 2013b). Lim and McCann (2013b) find that the effect of negative attainment discrepancy on risk-taking is moderated by the values of agents' stock options and the moderating effect differs for CEOs *vs.* outsider directors. Chng, Rodgers, Shih, and Song (2012) suggest that it is the fit between agents' compensation scheme, dispositional trait and organisational performance context inducing strategic risk-taking.

Despite these recent advancements, attention has been concentrated on the effect of compensation level relative to a reference point. There remains inadequacy of substantive interaction between risk bearing and risk-taking perspectives. In risk bearing studies, particularly agency studies, strategic risk-taking is viewed as a pure gamble where agents only passively bear any consequences of the decisions and the level of personal financial and human capital exposed to the consequences determines their tendencies to avoid risk (Martin, Gomez-Mejia, & Wiseman, 2013). In risk-taking studies, managerial risk-taking is driven by the self-assessed ability to reduce the chance of adverse outcome and contain its impact on the organisations over the process of pursuing better performance. This fundamental difference presents opportunities for future research to reconcile the explanations for the agency phenomenon. One might reason that CEO and outsider directors have different risk profiles not only because of the varied level of risk-bearing but also because CEOs are more likely to fall prey to competence trap and self-serving bias given their direct involvement in risk management (Billett & Qian, 2008). In this regard, prior success may influence differently CEOs and outsider directors whose personal wealth is tied to restricted stock or stock option value. This disparity may be particularly salient in the light of social praise for the CEOs' prowess. In much the same way behavioural agency model results from an insightful combination of behavioural decision theory and agency theory, we argue that the interaction between risk bearing and risk-taking research may settle the theoretical debate and advance the growing stream of both multi-agent perspective and behavioural strategy.

### **2.4.3 C) Risk-taking and uncertainty-mitigation – implications for “overconfidence”**

Overconfidence is one of the most common cognitive biases researched by management scholars in attempts to explain managerial and firm behaviour. However, the term itself is often loosely used and conflated with other constructs, such as narcissism, hubris, ego and overoptimism. Moore and Healy (2008) identify three distinct types of the psychological processes of overconfidence in the extant literature: (i) overplacement of one’s performance relative to others, (ii) overprecision in one’s beliefs and judgment, and (iii) overestimation of one’s abilities and performance (see also Hayward, Shepherd, & Griffin, 2006 for a review). Most of the entrepreneurship research on overconfidence has been focused on individual’s overestimation of the correctness of his/her knowledge and on biased prediction of the occurrence of non-controllable events. This follows a trait approach wherein overconfidence is one of domain-free, personal characteristics (Hiller & Hambrick, 2005; Russo & Schoemaker, 1992) and closely related to narcissism (Zhu & Chen, 2015, 2014). In contrast, most of the strategy research on overconfidence is concerned with managers’ self-assessment about the efficacy of their past coping mechanisms and about the organisations’ future performance (Chatterjee & Hambrick, 2011; Hayward & Hambrick, 1997; Hayward, Rindova, & Pollock, 2004; Li & Tang, 2010; Tang, Li, & Yang, 2012). This literature conceptualises overconfidence as socially constructed sense of potency driven by actors’ construal of their experiences and the social praise.

While both types of “overconfidence” are valid and of interest to psychologists (Klayman, Soll, Gonz, aacute, lez-Vallejo, & Barlas, 1999), each is more likely to be found in one strategic decision context than another and has implications for different theories of risk and uncertainty. Overprecision may bear a closer relation to the estimation of future outcomes and thus play an important role in taking “risk as propensity” where incomplete information prevails in a structured decision task and actors persist in predicting the unobserved probability distribution. Conversely, overestimation about one’s own ability may be more associated with “uncertainty as degree of confidence” in the case of ill-structured decision environments (Simon

& Houghton, 2003). Overestimation occurs when actors truncate mental search to the most available information inputs – guided by the natural tendency to avoid excessive cognitive burden – and place too much confidence on the diagnosticity of the inputs initially retrieved from memory (Feldman & Lynch, 1988). When environment changes, previous strategies and performance feedback may become tenuously linked with positive outcomes. Those fixated on the wrong diagnostic cue tend to express extreme certainty about the prospect of their performance yet end up with failure (Simon & Shrader, 2012).

Conflating risk and uncertainty as well as overprecision and overestimation has led entrepreneurship studies to disprove the effect of overconfidence on risk-taking (Simon et al., 2000). One might reason that it is the overestimation of ability and performance driving entrepreneurial actions and excess market entry (Wu & Knott, 2006). Social praise, celebrity effect and attribution bias may only amplify the overestimation of ability, as opposed to the overprecision of prediction (Chatterjee & Hambrick, 2011; Hayward & Hambrick, 1997; Hayward, Rindova, & Pollock, 2004; Li & Tang, 2013). Thus it is important to specify the type of overconfidence being discussed and how it relates to the decision context under research – be it risky or uncertain. Construct clarity is the first step for researchers to develop convergent but varied measures in search of robust findings (Suddaby, 2010). Only when different overconfidence measures can agree on what they assess would the studies become commensurable and the systematic building of knowledge be achieved (Hill, Kern, & White, 2012).

#### **2.4.4 D) *Uncertainty: a good thing or a bad thing?***

“Uncertainty as degree of confidence” and “uncertainty as opportunity creation” are internally consistent accounts of uncertainty and follow from classic insights. What distinguish one from the other are the varying implications for the role of uncertainty in decision making.

Entrepreneurship literature has extensively discussed the role of uncertainty in preventing individuals or firms from engaging in entrepreneurial activities (McKelvie, Haynie, & Gustavsson, 2011). Causation and discovery models suggest that uncertainty arising from information incompleteness or inadequate cognitive capacity undermines individuals' ability to design a return-maximising strategy. It is also received that profitable opportunities lie beneath environmental volatility, such as technological changes (Shane, 2000). In evaluating the feasibility of the opportunities, entrepreneurs attach confidence to their prior beliefs about the market through the exercise of entrepreneurial judgment (Casson, 1982). Whether judgment transforms to action depends on the perceived level of uncertainty (McMullen & Shepherd, 2006), which undermines the capacity to form correct judgments and preclude the validity of planning (Penrose, 1959). To this end, entrepreneurs tend to avoid investment options filled with a strong sense of doubt or strive to reduce it using real option, internalisation and imitative strategies.

In stark contrast, effectuation theory downplays the detrimental role of uncertainty. Whether an actor is subject to bounded rationality or pure uncertainty is no longer the point. Effectuating actors first decide on the level of affordable loss – a notion closely related to magnitude of loss – that they are willing to forgo in case of failure to create opportunities, and experiment with as many strategies as possible within this constraint (Sarasvathy, 2001). Unlike the case of opportunity discovery where information search is extensively used to enhance the degree of confidence in prediction, entrepreneurs now strive to generate “volatility” and build “uncertainty” in the sense that more future options are to be enacted in order for them to be able to increase returns under any unexpected contingencies (Alvarez & Barney, 2007). Risk is still important in the opportunity creation process. But when risk is accounted for – in fact the level of affordable loss has to be determined prior to any entrepreneurial action – uncertainty is not so much a hindering factor as suggested by the discovery or causation theory of entrepreneurship and may even become desirable considering its value in fending off imitation (Alvarez, Barney, & Anderson, 2013). As Sarasvathy (2001: 250) puts, “to the extent that we can control the

future, we do not need to predict it”. If researchers confuse the meaning of uncertainty between those two contexts, one might conclude that it is at odds with the conventional thinking that human beings prefer risky to uncertain situation (Ellsberg, 1961).

Compared to other boundary disputes, the contention over how uncertainty matters in the process of enterprising has arisen only recently as a sub-argument underneath the major debate on the theory of entrepreneurship, and requires most scholarly attention. A clear boundary definition as to when each conceptualisation of uncertainty is most likely to predominate and how the situation prompts the shift of dominance from one to the other may spawn new research avenues for entrepreneurship. The next step may be finding empirical evidence of whether and how entrepreneurs deliberately create and embrace uncertainty to explore future contingencies and ward off potential followers.

## **2.5 Conclusion and Future Research**

It is not uncommon for social scientists to conflate risk and uncertainty. Williamson (1975: 23) claims that “the distinction is not one with which I will be concerned – if indeed it is a truly useful one to employ in any context whatsoever”. The difficulty of modelling uncertainty has particularly led economists to assume away those cases where the future cannot be represented by probabilistic statements (Epstein & Wang, 1994). Even if the bifurcation is drawn, some argue that the boundary is vague and have no problem with applying probabilistic calculus to uncertainty (LeRoy & Singell, 1987). One might wonder if it is necessary to distinguish one from the other. This chapter provides an answer to this question by reviewing two broad literatures; how risk and uncertainty are conceptualised in seminal studies, and how contemporary empirical research understands the role of risk and uncertainty in strategic decision making. We offer an attempt to integrate and synthesise the vast and diffuse body of knowledge produced by strategy, entrepreneurship and IB scholars, and show that clarifying the conceptual distinctions may improve these disciplinary research.



Drawing on works including Knight, Keynes, Popper, and Penrose, we identify two distinct conceptualisations of risk. “Risk as frequency” refers to known probabilities assigned to known outcomes. This is the foundation for the classic notion of risk aversion where actors prefer a slightly less certain payoff to a higher expected value from an uncertain payoff (Weber & Milliman, 1997). Nevertheless, strategic contexts are rarely featured with a clearly defined probability distribution, rendering risk-as-variance computationally intractable (Baird & Thomas, 1985). “Risk as frequency” has led measurement to focus on *ex-post* calibration of return volatility, and thus fits imperfectly with management scholars’ fundamental concern about the *ex-ante* role of risk in strategic decision processes (Ruefli, Collins, & Lacugna, 1999). In contrast, “risk as propensity” applies the propensity interpretation of probability to the context of strategic risk-taking where, more often than not, managers have too little empirical data to calculate the probability distribution. This interpretation paves the ground for the crucial role of managerial ability and control in decision making (March & Shapira, 1987). When risk is defined as frequency, individuals’ attitude toward risk is largely determined by personal dispositions and the extent of risk bearing. When risk is defined as propensity, behavioural theory contributes substantially to our understanding of how context overrides disposition and affects managers’ tendency to take risk. Thus “apparent risk seeking” is more likely to result from a strong belief in one’s own ability and skills rather than a great tolerance for the chance of loss (Wu & Knott, 2006).

Similarly, we identify two distinct conceptualisations of uncertainty. “Uncertainty as degree of confidence” refers to an individual’s degree of belief on her ability to predict future states of the world, particularly the estimates of risk. The familiar notions of behavioural uncertainty, environmental uncertainty and technological uncertainty all fall in this category. As the degree of confidence in the estimates of risk needs not to be correlated with the level of risk, we show that risk and uncertainty can exist simultaneously, as practitioners often claim. However, uncertainty invites disparate responses from firms and managers compared to risk.

Transaction cost economics, real option theory and organisational learning theory all contribute to our understanding of how firms mitigate uncertainty. No doubt it is true that the capacity to assume uncertainty and place confidence in one's own judgment about unforeseeable events is a distinguishing feature of entrepreneurs (Knight, 1921). But it is also evident that non-entrepreneurial decision making could involve substantial uncertainty. In contrast, "uncertainty as opportunity creation" seems to be unique to the entrepreneurial context. Within the constraints of collective social constructions, entrepreneurs seek to build the future states in their own favour. This form of uncertainty comes close to the familiar notion of unknowable unknown because no one knows how the future will unfold *ex ante*.

So far "Risk as propensity" and "uncertainty as degree of confidence" have attracted most attention. It seems that these conceptualisations well reflect the major risk and uncertainty faced by managers in strategic decision making. In the theory of the growth of firm, Penrose (1959) points out that risk refers to the possible loss that might be incurred as result of a given action, and uncertainty refers to entrepreneurs' confidence in his estimates. This definition is also shared by transaction cost economists, who further attribute uncertainty to "disturbances", be it behavioural or environmental (Chiles & McMackin, 1996). It is unlikely that a single measure of risk or uncertainty can be generalised across settings, and certain topics of strategic decision making align better with some specific aspects of risk or uncertainty than others (Janney & Dess, 2006). Empirical research has unsurprisingly generated a whole host of measures and proxies to capture these concepts. We did not focus on how any context-specific risk and uncertainty is conceptualised and measured. Nevertheless, our discussion of the concepts can guide future research on using correct operationalisation to align with the theory, and may address the equivocal findings resulting from the mismatch between theory and measurement.

More importantly, we identify important boundary disputes among the conceptualisations. Distinguishing between risk and uncertainty and between one

conceptualisation and another may contribute to answering four perplexing questions; a) Are entrepreneurs risk bearing or uncertainty bearing? b) Do mixed findings of managerial risk-taking arise from the lack of interaction between risk bearing and risk-taking research? c) Are managers overconfident of their knowledge entering into the predictive calculus or their ability to cope with ill-structured situations? d) Is uncertainty a good thing or bad thing to entrepreneurial action? These puzzles sum up the contested views researchers put forth to understand strategic and entrepreneurial decision making. We require a clear understanding of what it is that concerns decision makers in strategic decision making. Conceivably, the benefits of bifurcating risk and uncertainty conceptualisations go beyond those examples we have discussed.

### **2.5.1 *Future research***

Unlike previous research (e.g., Alvarez & Busenitz, 2001), we categorise the existing studies by their implicit or explicit understanding of risk and uncertainty, rather than disciplinary traditions. Nevertheless, the disciplinary foci have resulted in the fact that risk studies are concentrated on strategy and IB while entrepreneurial decision research is biased toward the study of uncertainty. We suggest that a careful thinking on uncertainty may bridge those two broad streams by shedding light on the interactive relationship between risk and uncertainty.

Consider the case that researchers often conflate environmental risk and uncertainty in studies of uncertainty mitigation. For instance, because MNEs with dispersed international network can switch productive activities among different locations in response to factor cost fluctuation in any given country including the home country, international diversification is considered to confer a real option advantage over non-MNEs, as opposed to a risk reducing advantage (Belderbos & Zou, 2007; Fisch & Zschoche, 2012; Lee & Makhija, 2008, 2009; Lee & Song, 2012). While it is well received that real option provides firms with operational flexibility under uncertainty, Cuypers and Martin (2009) nevertheless acknowledge that the

concept of uncertainty in real option theory is by definition one of risk. To confront this issue, one needs to distinguish between endogenous uncertainty – which is addressed by learning and growth option, and exogenous uncertainty – which is addressed by hedging and switch option (Xu, Zhou, & Phan, 2010). The definition that Cuypers and Martin (2009) use may be one reason why they find supportive evidence of the option value of joint venture under exogenous uncertainty but not endogenous uncertainty. We argue that an alternative approach is to distinguish between strategy and operational flexibility because the former is more closely related to mitigating “uncertainty as degree of confidence” through “wait and see” while the latter allows for reducing “risk as frequency” through orchestrating and coordination (Belderbos & Zou, 2007; Tong & Reuer, 2007). These distinctions may reconcile the equivocal findings of the growth option value associated with joint venture in particular (Li & Li, 2010; Reuer & Leiblein, 2000; Tong, Reuer, & Peng, 2008). Interestingly, Hawk, Pacheco-De-Almeida, and Yeung (2013) report an interplay between risk and uncertainty. Firms with the ability to execute investment projects faster than rivals face less risk of being preempted so that they can delay entry into an uncertain new market and still achieve superior performance. Although we did not focus on the boundary between “risk as frequency” and “uncertainty as degree of confidence”, we believe that a fine-grained conceptualisation is also instrumental in reconciling previous contentions.

In addition, “uncertainty as degree of confidence” can be viewed as subjective individual perception that hinders experiential learning. Organisational learning research suggests that firms may not always be able to extract benefits from previous experience (Heimeriks, 2010; March, 1991; Zollo, 2009). The notion that prior experience generates valuable knowledge and influences managers’ risk-taking tendency is based on the premise that managers can effectively identify common aspects among contexts and make appropriate inferences (Gavetti & Levinthal, 2000; Levinthal & March, 1993). Uncertainty makes ineffective the analogical mapping schema that managers use to classify the environments based on the degree of structural similarity (Agarwal, Anand, Bercovitz, & Croson, 2012; Miller &

Lin, 2014), and increases the chance of superstitious learning that jeopardises performance (Miller, 2012). High level of perceived uncertainty casts doubt on managers' judgment of what evidence of past cases and what elements of the current context should be taken into account in efficiently and effectively adapting to the new environment (Galavotti, 2015), thus jeopardising managers' ability to mitigate the associated risks and weakening their tendency to take risk.

Extant literature has implied several sources for uncertainty that allow for firm level operationalisation of the concept. First, a great level of causal ambiguity due to psychic distance largely undermines managers' ability to understand the links between actions and outcomes (Johanson & Vahlne, 2009). As a result, managers may have little confidence in the efficacy of the preconceived coping mechanisms accumulated in their mental portfolio. Although trial and error learning and *post hoc* adjustments are always feasible (Prashantham & Floyd, 2012), distant markets are unforgiving of missteps and success is bound to come at high price when learning is ineffective (Petersen, Pedersen, & Lyles, 2008). Managers may either pick up the salient signals of the new context that differ dramatically from what they have experienced or become overwhelmed by the growing feeling of doubt, unreliability and anxiety. Hence the intention to take risk is suppressed. This view is partly supported by empirical evidence that very few large MNEs branch out to psychically distant markets located outside the home region (Rugman & Verbeke, 2004). Future research can examine how different aspects of psychic distance reduce risk-taking in different ways and under what conditions the effect of psychic distance can be contained.

Second, the novelty of the focal task may moderate the efficacy of past experience. When the focal task is distinctly novel, the way the task needs to be managed changes dramatically and the action-outcome relationship becomes ambiguous (Miller, 2012). Knowledge acquired by experiential learning now gives little guidance on both predicting future scenarios and evaluating managers' coping abilities, thereby undermining their confidence of surviving the risk (Zollo, 2009). An extreme example of task novelty is investing in a new

industry in a foreign country, where the accumulated knowledge related to risk hedging and risk management no longer applies and may thus constrain managers' confidence of controlling the project risk within tolerable levels. This effect is found among various modes of market entry (Finkelstein & Halebian, 2002; Inkpen, 2000; Reuer, Shenkar, & Ragozzino, 2004). It has been shown that even opportunity discovery is not simply a risk-taking task, but could involve a substantial level of uncertainty depending on task novelty (Miller, 2012). Following our conceptualisation, future research may yield important insights into the varying interplay between risk and uncertainty under opportunity discovery *vs.* opportunity creation.

Third, the heterogeneity of the stock of prior experience has an impact on learning. Managers' sense of doubt can emanate not only from a lack of key information but also when they are overwhelmed by the abundance of conflicting meanings the current information conveys (Lipshitz & Strauss, 1997). Diverse experience can address this problem by increasing the breadth of knowledge sources, from which managers can make a precise recognition of the structural similarities between source and target situations (Gary, Wood, & Pillinger, 2012) and acquire more accurate understanding of the action-outcome relationship (Gavetti, Levinthal, & Rivkin, 2005). Significant variation in the experience base also confers managers a wide variety of potential approaches to be employed to grapple with the adverse occasions (Haunschild & Sullivan, 2002; Perkins, 2014). In stark contrast, depth of experience in the same, repeated task undermines managers' ability to adapt to new contexts and thus produces rapidly diminishing returns (Chetty, Eriksson, & Lindbergh, 2006; Gary, Wood, & Pillinger, 2012; Gavetti, Levinthal, & Rivkin, 2005). Future research may investigate whether a manager would become less susceptible to contextual influences and exhibit more consistent decision models as she gains more experience of varied tasks within a distinct group of decisions and under what conditions structured *vs.* adaptive decision models improve performance.

Although it is unlikely that strategic decision can be judged as good or bad based on a normative rule, the way in which managers adjust strategic choices to risk and uncertainty often

has performance implications. Uncertainty undermines the effectiveness of deliberate learning such that relying on the existing architectural knowledge and predefined adaptive design may cause firms to experience first a significant drop in performance and then a period of recovery when expanding into a new market (Petersen, Pedersen, & Lyles, 2008). In contrast, learning-by-doing and real option strategy may be better suited to addressing uncertainty, and result in superior performance (Alvarez, Barney, & Anderson, 2013). Various research designs can be employed to examine the decision-performance relationship. On the one hand, eliciting techniques such as cognitive mapping and verbal protocol would reveal how managers arrive at a strategic decision – by comprehensive planning and systematic search or by a flexible, open-ended approach, and the evaluation heuristics being used in the decision process (Williams & Grégoire, 2015). On the other hand, experimentation allows researchers to manipulate hypothetical risky or uncertain environments by changing the amount of information, the extent of non-controllable disturbance or capability cues on managers' ability. Adaptive simulation game can also be designed to take managers through the process of opportunity creation wherein the world is defined by uncertainty. Repeated experiments are effective in shredding capricious, idiosyncratic cognitive processes associated with any single decision, and draw attention to the logic underlying the behaviour rather than the rationalisation of the behaviour. All of these methods can shed new light on the relationship between decision process and firm performance.

In the following chapter, we build on our clarification of the risk and uncertainty concepts. Our review of the general management research is applied to illuminating how the IB literature has examined the role of risk and uncertainty in FDI decisions. We focus, in particular, on “risk as propensity” that has been mostly researched in the literature at the firm and managerial levels of analysis. We propose that a unifying framework of FDI risk-taking is needed to address the limitations of the current approaches. The framework is informed by the recent microfoundations movement in strategy theory and established around the concept of risk propensity to account for the heterogeneity in managers' tendencies to take risk. We suggest

that the theory of FDI could benefit from a revisit to the nature of “risk” and our microfoundational reconceptualisation of risk-taking.



### **3 EXPERIENCE AND FDI RISK-TAKING: A MICROFOUNDATIONAL RECONCEPTUALISATION**

#### **3.1 Introduction**

Managing risk is one of the most important strategic objectives for managers of MNEs (Ghoshal, 1987). Given the pervasiveness of risk and the significant resource commitments of cross-border venturing (Cosset & Roy, 1991), an extensive literature has been devoted to understanding the impact of risk and uncertainty on FDI decisions (e.g., Delios & Henisz, 2003a; Delios & Henisz, 2003b). Globalisation has given rise to new forms of risks, including cyber attack, industrial espionage, governmental surveillance and public-private tension, among others. It is imperative for IB scholars to revisit the state of current knowledge and examine whether extant theoretical and empirical approaches can address the questions posed by the ever increasingly complex world.

The past two decades has seen a steady and remarkable growth of FDI into developing countries (Feinberg & Gupta, 2009). There is an incomplete explanation as to why MNEs engage rather than avoid weak institutions and policy hazards commonly found in these markets. The dominant explanation is predicated on an observed relationship between a firm's international experience and risk-taking, attributing this relationship to firm-level capabilities (Delios & Henisz, 2003b). This explanation further extends to home country experience, which is hypothesised to be one of the major sources of international competitive advantage for EMNEs (Cuervo-Cazurra, 2011; Del Sol & Kogan, 2007; Luo & Wang, 2012). While it is true that repeated exposure to the same risk may help managers develop coping mechanisms to contain the effect of adversity and to recover from it so that they believe they can condition the odds suggested by external information (Oetzel & Oh, 2014), the firm-level capabilities are only inferred and often assumed to be an automatic result of experience. We question whether the organisational capability is real or a misconception of the decision makers, especially when

generalizing experience from one context to another is often required for FDI decision-making, which involves the transfer of knowledge across the borders. This is not an unreasonable question given that cognition research suggests that individuals work within a framework constrained by numerous cognitive biases, leading to misconceptions (Schoemaker, 1993). While the primacy of organisations is a prevalent assumption in FDI research, the study of risk particularly requires taking into account managers' own views (March & Shapira, 1987). The fact that IB scholars rarely engage in the discussion of risk-taking with, for example, cognitive psychologists, has deprived the literature of the benefits of cross-disciplinary conversation (Hill, Kern, & White, 2012).

In this chapter, we review the current empirical literature on FDI risk-taking and consolidate this field of study with a microfoundational framework. Different terms have been used to represent environmental risk in the home and host country, including country risk, institutional risk and political risk (see Table 1). While country risk encompasses many aspects of country-specific conditions, institutional and political risk are more narrowly defined (Feinberg & Gupta, 2009). We focus on the theoretical account that could contribute to our understanding of MNEs' responses to any environmental risk. Our review points to two prevalent accounts in this field of study – the firm-level explanation based on organisational risk-taking and the individual-level explanation based on managerial risk preference. Both yield important insights into this phenomenon. Yet the lack of an integrative framework leaves the question open as to why economic theory of FDI has generally received empirical support while individual-level of analyses conclude that managers display idiosyncratic tendencies to take risks (Maitland & Sammartino, 2015a; Schotter & Beamish, 2013). The former argues that various behavioural assumptions may be suppressed by managers' fiduciary responsibility and organisational routines, so that the macro fact can be sufficiently accounted for by macro causality without appeals to individual actors (Greve, 2013). The latter contends that individual-specific histories explain variation in revealed preferences and firm decision-making (Buckley, Devinney, & Louviere, 2007; Maitland & Sammartino, 2015b). Researchers focusing on one

level of analysis will find it hard to agree with those focusing on the other as to what causes firms' differential risk-taking in FDI.

We bring these separate accounts together by employing the microfoundations approach as a meta-framework. "Microfoundation" is a suitable lens in that it focuses explicitly on micro-level actions as a source of heterogeneity in the macro-level outcomes. In line with previous studies (Felin, Foss, & Ployhart, 2015), we refer to individual as "micro" or "lower-level" and organisation as "macro" or "higher-level". Drawing upon behavioural decision theory, we use the concept of risk propensity to represent individual managers' current tendencies to take risk (George, Chattopadhyay, Sitkin, & Barden, 2006; Sitkin & Pablo, 1992). Despite the long-standing assumption of managers being risk neutral in FDI theories (Buckley & Casson, 2009), we posit that individual risk propensity changes and is more the result of contextual influences than it is of dispositional trait – i.e. one's intrinsic risk preference. While in the studies of decision-making, researchers can practice infinite regress to the life history of the manager in search of the ultimate causes (Kish-Gephart & Campbell, 2015), our focus is to identify the microfoundations for the macro-level cause-effect relationship – i.e. the capabilities paradigm (Gavetti & Levinthal, 2004). We reformulate the relationship between firm experience and subsequent FDI by reference to the underlying cognitive processes at the micro level. A general theoretical account for FDI risk-taking is established that can be applied to any MNEs and has particular implications for understanding EMNEs' behaviour. Moreover, the meta-framework of microfoundations suggests focusing on the aggregation principles that transfer individual cognition to organisation-level decisions. We therefore integrate individual-level mechanisms into the organisational context, and complete the logic chain flowing from firm experience through managerial cognition to firm FDI, leading to a comprehensive microfoundational framework for FDI risk-taking. Each link in this logic chain may be a promising research topic in its own right. Yet only when researchers can combine the study of managerial cognition with organisation-level theories can we resolve the tension between the current macro-level and micro-level approaches and a fuller understanding of FDI risk-taking emerge.

**Table 3 Environmental risk concepts in the FDI literature**

<b>Concept</b>	<b>Definition</b>	<b>Measurement</b>	<b>Examples of empirical studies</b>
Country risk	A collection of various aspects of risk that exists in the host country environment	Perceived Environmental Uncertainty (PEU) (Miller, 1993; Werner, Brouthers, & Brouthers, 1996)	Agarwal and Ramaswami (1992); Brouthers (2002); Brouthers and Brouthers (2001, 2003); Cui and Jiang (2009); Kim and Hwang (1992); Tseng and Lee (2010)
Institutional risk	Host country risk arising from the under-developed institutions, including regulatory quality, rule of law, control of corruption and political instability	World Governance Indicator (WGI) (Kaufmann, Kraay, & Mastruzzi, 2009)	Lu, Liu, Wright, and Filatotchev (2014); Oh and Oetzel (2011); Ramasamy, Yeung, and Laforet (2012); Slangen and Beugelsdijk (2010)
Political risk	The discretionary policymaking capacities as a result of insufficient checks and balances upon political actors of the host country	Political Constraints Index (POLCON) (Henisz, 2000)	Alcantara and Mitsuhashi (2012); Delios and Henisz (2000); Delios and Henisz (2003a); Delios and Henisz (2003b); Demirbag, Glaister, and Tatoglu (2007); Garcia-Canal and Guillén (2008); Henisz and Delios (2004, 2001); Holburn and Zelner (2010); Slangen (2013)

This chapter contributes to the literature on FDI decision-making in two respects. First, we reconcile the mixed findings by organisational risk studies, and provide a theoretical lens for

managerial risk studies to search for the lower-level source of heterogeneity. By casting light on the missing role of the managers through the lens of risk-taking, we complement the conventional economic determinism of FDI theories. Second, we integrate the individual-level account of risk-taking into the organisational context in order to propose a causal mechanism underlying the observed relationship between firm experience and firms' FDI risk-taking. By taking into account firm experience as the proximate cause of managerial cognition and the way in which managerial cognition transforms to firm-level decisions, this comprehensive framework has the potential to consolidate the current literature and resolve the tension between organisational risk and managerial risk research.

In Section 2, we review the extant empirical literature on risk in FDI, and discuss the tensions and limitations of the current approaches. In Section 3.1 and 3.2, we explore the nature of the risk to justify an individual-level theoretical mechanism, built on the concept of risk propensity drawn from behavioural decision theory. Section 3.3 describes the microfoundations of the dominant capabilities paradigm by reformulating the relationship between firm experience and FDI. This is not an alternative approach to the capabilities paradigm at another level of analysis, but a starting point for a holistic framework for understanding FDI risk-taking, which requires incorporating the social context in which FDI decisions are made. Section 4 illustrates how individual-level mechanism may interact with organisational theories to aggregate to firm actions, leading to the comprehensive microfoundational framework. Implications for future research are discussed in Section 5, by reference to the internalisation theory and the Uppsala model, as well as new avenues for empirical inquiries.

### **3.2 Risk in the FDI literature**

We review the extant empirical research that explicitly incorporates risk or uncertainty into theoretical development or that directly operationalises the concepts in empirical testing, or both, in attempts to explain FDI entry, governance and commitment decisions. We started with

a keyword search of “risk”, “uncertainty” and “hazard” in the abstracts to retrieve the relevant articles from five core IB journals (*International Business Review*, *Journal of International Business Studies*, *Journal of International Management*, *Journal of World Business*, and *Management International Review*) and used cross-citations to identify other papers that were not captured by the keyword search but fell within our sampling criteria. 93 articles are identified, covering the time period from 1976 to 2015 (see Appendix). We find that, chronologically, risk studies in IB move from aggregate analysis to firm heterogeneity and, most recently, shift toward managerial heterogeneity. While risk and uncertainty are used interchangeably, the vast majority of the studies indeed examine the role of host country environmental risk and align well with the “risk as propensity” concept. Tensions exist as to whether organisational risk-taking and managerial risk preference is the most appropriate level of analysis.

### **3.2.1 Organisational risk-taking**

Early international trade research spawned aggregate analyses of FDI flows. The underlying theoretical logic is that country risk is viewed as one of location disadvantages that firms try to avoid (Dunning & Lundan, 2008). Drawing upon country-level data, the aggregate analyses present mixed findings. Whilst some report a negative effect of political risk on FDI (Bekaert, Harvey, Lundblad, & Siegel, 2014; Levis, 1979; Schneider & Frey, 1985), others fail to find a significant relationship (Asiedu, 2002; Bennett & Green, 1972; Globerman & Shapiro, 2003; Kobrin, 1976). The inconclusive evidence runs counter to the anecdotal evidence that political risk is of the most concern to managers in choosing investment locations (Kobrin, Basek, Blank, & Palombara, 1980; Nigh, 1985).

In response, IB researchers have cast the spotlight on the firms that make risky investments. The firm as the unit of analysis and firm-level data allow researchers to study the effect of risk on investment behaviours other than location choices, including entry mode, equity stake in subsidiary and various expansion patterns. These studies pay particular attention

to firms' heterogeneous tendencies to take risks and ascribe the phenomenon to industry sector (Brouthers & Brouthers, 2003; Brouthers, Brouthers, & Werner, 2002) and firms' capabilities (Tseng & Lee, 2010). Most notably, it is found that previous experience in risky environments has a positive effect on subsequent entry to risky countries (Del Sol & Kogan, 2007; Delios & Henisz, 2000; Delios & Henisz, 2003b; Fernández-Méndez, García-Canal, & Guillén, 2015; Holburn & Zelner, 2010). Researchers attribute this empirical regularity to the organisation-level capabilities since organisational learning theory posits that economic agents and naturally, firms, gain informational advantages that can be redeployed in the neighbourhood of their past courses of action (Cuervo-Cazurra, 2011; Cuervo-Cazurra & Genc, 2008).

### **3.2.2 *Managerial risk preference***

Most organisation-level studies leave open the question as to what extent observable characteristics of the environment can sufficiently reflect managers' subjective perception of the environmental risk, which often vary with contextual factors and individual information processing abilities (Milliken, 1987). Risk-taking is, after all, a matter of strategic choice, and it is the managers who make the choice. This notion has led a number of studies to employ a more micro-level lens on managerial heterogeneity. International entrepreneurship (IE) researchers have examined the effect of managers' risk perceptions on entry mode choices (Forlani, Parthasarathy, & Keaveney, 2008) and speed of internationalisation (Acedo & Jones, 2007). Particular attention has been paid to the way in which managers define risk and employ perceptual measurement scales accordingly. Kiss, Williams, and Houghton (2013), in particular, define internationalisation risk bias as the difference between objective risk indicators and managers' subjective risk perceptions, which explains post entry international scope.

Perceptual studies of risk, Henisz (2000) argues, suffer from an endogeneity issue. This has led follow-up studies to focus on managers' and shareholders' intrinsic characteristics. Researchers draw upon agency theory to delineate the heterogeneous risk preference of various groups of agents. Rather than being measured directly as an individual-level trait, risk

preference is inferred from firm behaviour in FDI, including equity stake in foreign subsidiaries (Filatotchev, Strange, Piesse, & Lien, 2007), scale and scope of internationalisation (George, Wiklund, & Zahra, 2005), the act of internationalisation and entry mode (Liang, Lu, & Wang, 2012), and location choices (Strange, Filatotchev, Lien, & Piesse, 2009). Most recently, the level of analysis has matched up with the level of theory. Building on cognition research, researchers focus on the heterogeneous ways in which individual managers evaluate host country political risk, and how individual-level experience accounts for this heterogeneity and compensates for the lack of organisational routines regarding risk-taking (Maitland & Sammartino, 2015a). This remedies the assumption by the capabilities paradigm that individuals are *a priori* homogeneous or individual characteristics are randomly distributed (Felin & Foss, 2005).

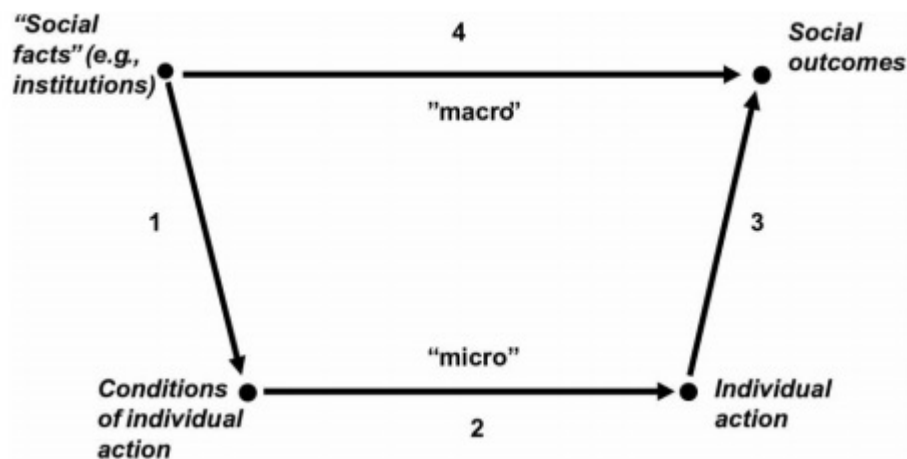
### **3.2.3 Limitations of the current approaches**

Both organisation-level and individual-level accounts have generated important insights and provided contingency perspectives on why some firms are less deterred by host country environmental risk than others, thereby unveiling a distinct source of competitive advantage for MNEs (Oetzel & Oh, 2014). Both suffer from limitations that have hindered theoretical development. Coleman's (1990) "bathtub" model of social science explanation summarises the tension between the current approaches (see Figure 1). The organisation-level account, represented by arrow 4, is predicated on the assumption that macro mechanisms can sufficiently account for the macro fact to be explained, thereby attributing the differential risk-taking behaviour to firm capability (Cuervo-Cazurra & Genc, 2011). This is, in fact, a *post hoc* rationalisation of firms' behaviour. Analyzing a macro-level phenomenon without direct evidence of its generative mechanism would inevitably leave findings open to alternative explanations (Felin & Foss, 2005). Although capability by definition does confer a potential competitive advantage, it neither is directly observed nor would necessarily be an antecedent to FDI decisions (Hashai & Buckley, 2014). Insufficient attention has been paid to the decision-making process and a negligible role assigned to the decision makers. The individual-level



account, in contrast, is predicated on the assumption that managerial cognition is a non-trivial source of heterogeneity in macro outcomes and needs to be taken into account in variance analyses (Buckley, Devinney, & Louviere, 2007; Maitland & Sammartino, 2015a; Maitland & Sammartino, 2015b). Individual heterogeneity is primarily accounted for by the most proximate causes – personal traits and characteristics (arrow 2). This line of research lacks a coherent theoretical lens by which cause-effect relationship can be well explained, and the link is missing between individual cognition and firms’ decisions (arrow 3).

**Figure 2 Coleman's general model of social science explanation**



The two approaches run in parallel and each may account for some of the variance in the macro-level phenomenon. Unsettled is the question whether the individual-level account can provide a much needed causal mechanism for the observable macro-macro links. This question becomes particularly salient when researchers seek to explain the effect of experience on FDI risk-taking. While the organisation-level account cannot reveal the underlying mechanism by which firm experience induces firm risk-taking, the individual-level account focuses only on how personal histories affect managerial cognition in order not to conflate firm experience with individual experience (Buckley, Devinney, & Louviere, 2007; Maitland & Sammartino, 2015a). It is also difficult for micro-level research to depict the way in which individual cognition contributes to firms’ strategic decisions *ex post*. Put differently, arrow 1 and 3 remain missing,

and the two approaches remain paralleled sources of heterogeneity. Researchers focusing on one level of analysis will come to a very different conclusion as to what is behind FDI risk-taking, compared to those focusing on the other. The fact that IB literature has viewed FDI risk-taking as one of the major competitive advantages of EMNEs makes its explanations of particular theoretical importance. The lack of interaction between higher-level and lower-level accounts has deprived the literature of the opportunity to complete the logic chain as to how firm experience influences FDI decisions, despite it being an enduring topic of interest in IB (Martin & Salomon, 2003).

### **3.3 Risk study in IB: In Search of Microfoundations**

We argue that, to integrate the macro and micro accounts, the first and foremost step is to explore the role of the managers – the lower-level vehicle by which the observed higher-level decisions are made. Examining how individual managers' behavioural attitudes matter provide the most proximate mechanism through which organisational variables affect organisational decision-making. This goes beyond establishing the empirical regularity as though some identifiable firm characteristics would automatically lead to certain strategic decisions (Felin, Foss, & Ployhart, 2015).

Our microfoundations approach is built on the discussion of the nature of risk. Review of the literature suggests that intuitive use of the risk concept has led it to being conflated with various location-specific characteristics such as cultural and historical ties (Strange, Filatotchev, Lien, & Piesse, 2009), governance cost (Teece, 1983; Werner, Brouthers, & Brouthers, 1996) and management challenges (Agarwal & Ramaswami, 1992). An unintended consequence is that risk studies in IB remain remotely connected with other disciplinary literatures, particular on behavioural strategy, which have proposed conceptual frameworks for risk-taking strategies based on sound decision theories and established causal understanding using experimental methods (Bateman & Zeithaml, 1989; Simon, Houghton, & Aquino, 2000; Thaler & Johnson,

1990). Drawing on behavioural decision theory, we describe the microfoundations of risk-taking in FDI, which builds on the concept of risk propensity.

### ***3.3.1 The nature of “risk”***

In IB theory, there is a consensus that FDI decisions are made by MNE headquarters, who select from a discrete set of alternatives in the optimal interest of the MNEs based on a calculative analysis of projected revenues *vis-à-vis* transaction costs (Buckley & Casson, 1976). When investment return is known, risk should not matter (Buckley, Devinney, & Louviere, 2007). Nevertheless, under most of the existing studies lies the risk aversion assumption in human nature held by neoclassical economists and agency theorists (Chiles & McMackin, 1996; Eisenhardt, 1989), as evidenced by the common hypothesis that country risk is negatively associated with foreign entry. An often unnoticed assumption in this approach is that risk is treated as an objective feature of the exogenous environment so that MNEs take risk as given and adjust the amount of resources to be committed to the specific market (Brouthers, 1995). While this implicit view is widely shared by previous studies, it leaves the role of managers negligible in the decision-making process.

### ***Subjectivity***

In strategic choices including FDI, risk involves *ex-ante* evaluation of future outcomes (Yates & Stone, 1992) and “exists in the eyes of the beholder” (Chatterjee & Hambrick, 2011: 203). Under the uncertainty of disequilibrium, a location choice made to maximise risk-adjusted return may be judged as involving unwarrantedly high risk when assessed *ex-post* using country risk indicators developed by outside observers from a post equilibrium stance (Liesch, Welch, & Buckley, 2011). An immediate reflection of the subjective nature of risk is that the buyers of political risk insurance rarely agree on the price the issuers charge (Henisz, 2003).

According to behavioural decision theory, risk arises from both the probability and the magnitude of loss (George, Chattopadhyay, Sitkin, & Barden, 2006; March & Shapira, 1987).

This definition departs from the instability of the environment *per se* and focuses on the adverse impact of environmental change on the firm. Weick (1979: 125) contends that “decision-makers in organisations intervene between the environment and its effects inside the organisation, which means that selection criteria become lodged more in the decision-makers than in the environment”. Managerial control over the environment constitutes the missing piece that previous studies of international risk have rarely considered. When managers evaluate an entry opportunity, they tend to rely on a biased overestimation of their own ability rather than external information of the unbiased performance distribution in a market (Wu & Knott, 2006). The predictions on the riskiness of a choice are colored by managers’ perceived ability to mitigate the negative consequences through reactive strategies and anticipatory plans (Bingham & Eisenhardt, 2011; Chatterjee & Hambrick, 2011; George, Chattopadhyay, Sitkin, & Barden, 2006; March & Shapira, 1987).

Further, different managers sacrifice different alternatives at the moment of choice as dependent on the choice set constructed. The observation that prior decision narrows down the range of the choices at a later stage of the FDI decision-making process is consistent with the nested structure discussed in the general choice modelling literature (Louviere, Flynn, & Carson, 2010; Tallman & Shenkar, 1994) and behavioural strategy theory (Gavetti, Greve, Levinthal, & Ocasio, 2012). While managers commonly employ economic thinking to screen out inefficient options at the consideration stage, they tend to switch to a different set of criteria and focus on minimizing the risk when making the final location choice among the shortlisted alternatives (Buckley, Devinney, & Louviere, 2007; Mudambi & Navarra, 2003). A range of individual-level factors may influence this selection process (Schotter & Beamish, 2013), such that a risky option in one choice set may be the least risky one in another. Without knowing the full choice sets it is hard to estimate the marginal contribution of risk in the final decision. Therefore, FDI studies need to take into account the “risk” as it appeared in the decision-making process rather than in the eyes of the researchers.

### ***Controllable and non-controllable risk***

In aggregate analyses of FDI, risk is entirely exogenous in that MNEs are assumed to respond passively to the environmental characteristics of the host countries. The organisation-level accounts adopting the contingency perspective move one step forward to posit that, rather than purely assessing the environment *per se*, firms take into consideration their ability to enact a favorable firm-environment relationship and develop entry strategies in accordance (Ring et al., 1990). This view is also consistent with behavioural decision theorists' focus on "control" in distinguishing managerial risk-taking from a gambling scenario (March & Shapira, 1987). Theoretically, one can draw a spectrum along which MNEs, at one extreme, passively accept all environmental risks as given and, at the other extreme, proactively seek to influence all risks to which they would be exposed. The distinction between controllable environment that cannot be influenced and non-controllable environment that results from firms' influential behaviour has important theoretical implications (Alvarez & Barney, 2007; Weick, 1979). Conflating controllable and non-controllable risk has led to confusing conclusions on managers' risk-taking tendencies (Wu & Knott, 2006).

An illustrative example is the nature of political risk. The political institutions literature suggests that political risk is an endogenous variable as MNEs have "the ability to block adverse and/or promote favorable policy change" within the given political structure (Henisz, 2003: 181). Firms face such an eventuality in the *ex-post* policy environment that the favorable terms negotiated at the time of entry may be altered by the host country government in an obsolescing bargaining scenario, so that managers have to factor their ability to guard against the overturning, alteration or reinterpretation of policy commitments into the entry decision (Boddeyn & Brewer, 1994; Delios & Henisz, 2003a). A common "non-market" strategy is to leverage the influence of the relevant political actors, the local electorate and the international and multilateral lending agencies (Henisz, 2000). Differential lobbying skills to engage these actors as a surrogate may lead the identical location to pose varying level of risk to two otherwise similar MNEs. However, there are other types of political risk such as societal turmoil,

ethnic conflict and civil warfare that result from the political dynamics between various branches of the government (Dai, Eden, & Beamish, 2013; Henisz, 2003). These risks arise when the power handover is contested via uprising by those who seek to challenge the political status quo, and often lead to asset seizure in the light of antiforeigner sentiment (Maitland & Sammartino, 2015a). Unlike the “status-quo” setting, MNEs may have little ability to forestall the occurrence of violence under turbulent circumstances and have to take the risk as given. Previous research suggests that firms respond to controllable and non-controllable risks in different fashion since the capacity of using insurance to hedge against exchange (non-controllable) risk vis-à-vis policy (controllable) risk varies substantially (Henisz & Zelner, 2010).

### ***3.3.2 Risk propensity – an integrating concept***

Behavioural decision theorists have developed the concept of risk propensity to substitute for the trait approach predicated upon individual disposition (George, Chattopadhyay, Sitkin, & Barden, 2006; Sitkin & Pablo, 1992). Risk propensity refers to an individual’s current tendency to take or avoid risk (Sitkin & Pablo, 1992). While individuals always hold a dispositional attitude toward risk-taking in general, the real tendency to take risk is overwhelmed by contextual factors (Sitkin & Weingart, 1995). Behavioural research proposes that, to economise on the scarce attention capacity, boundedly rational managers form simplified cognitive representations of the complex environment in decision-making (Gavetti & Levinthal, 2000). In a similar vein, risk propensity reflects a coherent cognitive structure, or “heuristics”, for dealing with a range of similar problems without reference to the details of any specific ones (Bingham & Eisenhardt, 2011). A risk situation can thus be reduced to workable aspects so that a rational actor would maximise her utility against the overall risk propensity – the weighted sum of the constituent aspects, be it controllable or non-controllable risk (March, 1981). Thus one might show more or less tolerance for risk depending on the decision domain (Weber, Blais, & Betz, 2002) and the specific aspect of country risk being discussed (Wu & Knott, 2006). A straightforward manifestation of the power of the concept of risk propensity lies

in the fact that it can be used to address the persistent myth that entrepreneurs are not fundamentally more inclined to risk than the others (Stewart & Roth, 2001) by identifying a context-specific risk-seeking orientation only devoted to chasing business opportunities but not in other life domains (Palich & Bagby, 1995).

Behavioural research has ascribed the variation in individuals' risk propensity to an array of cognitive factors (Schoemaker, 1993), the most prominent being performance feedback. As an integrating concept, risk propensity can accommodate competing theories that predict varied effect of previous performance on risk-taking. For instance, prospect theory suggests that framing creates a steeper utility curve on the loss side of a reference point than on the gain side so that poor performance may induce decision-makers to bet on the upside potential and make risky choices (Bateman & Zeithaml, 1989; Bazerman, 1984; Weber & Milliman, 1997). Quasi-hedonic editing theory, in contrast, argues that prior failure in goal attainment leads decision-makers to set lower goals and take less risk in subsequent decisions (Slattery & Ganster, 2002). The most pertinent explanation in the strategic decision context may be the one provided by managerial decision research (March & Shapira, 1987). Studies show that managers will persist in taking risks if prior outcomes are positive, giving rise to a sense of potency and self-serving attribution (Osborn & Jackson, 1988; Sitkin & Weingart, 1995). The outcome history of forestalling the occurrence of unfavorable scenarios and mitigating the impact on the foreign affiliate provides readily available evidence to managers about the extent to which their skills, talents and capabilities can help control the risk in this particular task (March & Shapira, 1987). Appearing to be a satisficing rather than an optimizing solution, the tendency to follow experience when constructing the choice set can be regarded as a rational process of adaptive learning that aims to reproduce past successes (Denrell & March, 2001; Hutzschenreuter, Pedersen, & Volberda, 2007), and is coined "feedback strategy" in the behavioural strategy literature (Greve, 2013).

More importantly, risk propensity can account for the subjective nature of the risk, which is assumed away by macro-level studies. Past successes and failures of the individual managers are translated into stereotypes and provide them with a frame of reference and a habitual way of evaluating new situations (Garud & Rappa, 1994). For example, managers' experience with a particular set of entry modes serves to constitute the "consideration set" for subsequent entry mode decisions in order to reduce the range of mode options to be evaluated (Benito, Petersen, & Welch, 2009). Risk propensity can also account for the distinction between controllable and non-controllable risk. As prospect theory was developed in such task settings that odds are exogenously given, the loss aversion thesis is more likely to hold when non-controllable, external threat is involved (Holmes, Bromiley, Devers, Holcomb, & McGuire, 2011). Conversely, risky behaviour is more likely when managers perceive a sense of control over the risk in question (George, Chattopadhyay, Sitkin, & Barden, 2006). This may explain why previous firm-level research has found mixed results on the relationship between experience and risky entry (Oetzel & Oh, 2014).

While an organisation-level account can only infer the mechanism from the relationship between two macro-level variables, individual-level theories emphasise individual actor-hood and specify the causal conditions for risk-taking behaviour. In the light of multiple realisation of a macro-level outcome, experimentation can test directly the competing hypotheses by different theories, and examine under what conditions any theory would prevail. To illustrate the usefulness of the concept, we reformulate the theoretical mechanism between experience and FDI using risk propensity, and show how the individual-level account can complement the dominant capabilities paradigm.

### ***3.3.3 Microfoundations of the capabilities paradigm***

Existing FDI studies have primarily attributed the relationship between experience and FDI entry into risky locations to firm-level capabilities (Fernández-Méndez, García-Canal, & Guillén, 2015), not least in the case of EMNEs. A typical argument is that EMNEs have honed



unique capabilities and expertise in dealing with poor institutional governance in the home country, and such capabilities are transferable to other developing countries of a similar level of institutional development (Cuervo-Cazurra & Genc, 2008; Del Sol & Kogan, 2007). This is not an unreasonable argument from the behavioural strategy perspective since the capacity to perform an activity tends to improve with experience (Zollo & Winter, 2002). However, research shows that simply gaining experience is not sufficient for creating capability (Haleblian, Kim, & Rajagopalan, 2006; Hayward, 2002), and capability is not necessary for a firm to enter risky locations (Mitchell, Shaver, & Yeung, 1992). What is learned from experience is not specified by this literature, calling for a micro-level explanation of what underpins the observed decisions (Bingham & Eisenhardt, 2011; Bingham, Eisenhardt, & Furr, 2007).

The search for microfoundations is particularly germane when the decision context changes. Cognition research suggests that individuals' performance of mental activities depends on their training and experience in the same task domain (Ericsson & Lehmann, 1996). As MNEs move from one country to another, the link between experience and capability may become tenuous. The specificity of a firm's routines hinders deployment of the existing capabilities outside its current geographic markets (Powell & Rhee, 2015). For MNEs, the inherited knowledge and home country imprint cannot always transfer to other similar markets (Giarratana & Torrisci, 2010), and experience of engaging with local stakeholders does not automatically lead to expertise in political hazard assessment (Maitland & Sammartino, 2015a). Experimental evidence suggests that even when we impose a utility maximisation model on managerial decision-making, the behavioural postulate – i.e. experience affects risk-taking – is still evident (Buckley, Devinney, & Louviere, 2007). If it is not capability, what induces the risky decisions?

Microfoundations research suggests that individual cognition poses a non-trivial source of heterogeneity for firm behaviour. Individuals' mental representations shape decision heuristics concerning what informational cues are indicative of risk, where to find that

information, and what constitute the evaluation criteria for interpreting the information (Bingham & Eisenhardt, 2011; Bingham, Eisenhardt, & Furr, 2007), so that managers adopting different heuristics to search for and analyze information would hold a higher or lower estimation of the probability of loss associated with investing in a given project. When the context changes and information is ambiguous, boundedly rational managers naturally employ analogical reasoning to extrapolate from their existing knowledge by making assumptions beyond what is firmly known (Jones & Casulli, 2014; Lipshitz & Strauss, 1997), in order to anticipate roughly the consequences of the alternative courses of action (Gavetti, Levinthal, & Rivkin, 2005). The complexity of the individuals' mental representations, in terms of the number of causal actors, linkages and their directions, is a function of individuals' context-specific experience (Maitland & Sammartino, 2015a; Maitland & Sammartino, 2015b). Whether managers can generalise their experience to another context depends on the nature of the risk. When managers have successful experience of dealing with the power structures and institutions similar to those in a particular host country, they place strong belief in their foresight related to identifying the pitfalls associated with regulations and contracting at the time of deal negotiation and also in their precautionary strategies, including partnering with certain stakeholders, that can best block adverse policy changes and remove the firm's image of being an exploiter (Ring, Lenway, & Govekar, 1990). The sense of confidence may be further amplified by social praise for managerial success and prowess (Chatterjee & Hambrick, 2011; Hayward & Hambrick, 1997; Hayward, Rindova, & Pollock, 2004; Li & Tang, 2013). In contrast, the experience with non-controllable risk is less of a cue to managers about their ability to control the risk and thus hardly transfers to other contexts (Oetzel & Oh, 2014). This explains the macro-level puzzle as to why experience has varying influence on MNEs' responses to controllable political risk and non-controllable macroeconomic turbulence of the host country (Garcia-Canal & Guillén, 2008).

However, analogical reasoning is not necessarily compatible with the capability argument for two reasons. First, the capabilities paradigm rightly points out that the usefulness of firms' prior experience hinges on the degree of structural commonality shared by two

contexts (Delios & Henisz, 2003b; Li, Qian, & Yao, 2015; Padmanabhan & Cho, 1999), e.g. regulatory environment (Cuervo-Cazurra, 2006; Perkins, 2014) and cultural similarity (Hong & Lee, 2015). When the commonality is only superficial, managers' foresight resulting from analogical reasoning could be misleading (Miller & Ireland, 2005; O'Grady & Lane, 1996). For example, Heidenreich, Mohr, and Puck (2015) find that managers tend to be overconfident about their ability to mitigate institutional uncertainty regarding a developing country market as they believe – based on prior experience in a developed country – that certain political strategies should work in their favor. This illusion of control over the environment induces managers to underestimate the external threats and drives an unwarrantedly risky entry decision. This is particularly prevalent when the new environment does not provide clear-cut information on the efficacy of the actions (Gavetti, Greve, Levinthal, & Ocasio, 2012) and when an individual is deeply committed to an old domain (Helfat & Peteraf, 2015). Second, the risk propensity based on previous experience may itself be unwarranted. The assumed capability underlying the risk-taking tendency could be a result of self-serving bias and superstitious learning (Zollo, 2009), which prompt managers to rely on semi-automatic processing and prevent them from attending to the unique characteristics of the focal context (Castellaneta & Zollo, 2015). In these cases, experience is not translated into capability or competitive advantage, yet still induces managers to make risky FDI decisions.

Following this logic, we can reformulate the argument underlying EMNEs' entry into other risky countries. Since home country institutions shape managers' mental models, EMNE managers are more tolerant of the risk that contracts may not be enforceable, compared to MNE managers from developed countries where enforceable contracts are the norm (Hoskisson, Eden, Lau, & Wright, 2000). The tendency to look at a novel environment through the lens of a domestic mindset is strengthened when the novel environment features noisy information (Nadkarni, Herrmann, & Perez, 2011; Nadkarni & Perez, 2007) and when managers have an emotional attachment to successful past strategies (Gavetti, 2012). Compared to MNE managers, it is more difficult for EMNE managers, who in general have a shorter history of international

venturing, to counter this tendency and adopt solutions that violate the domestic mindset (Contractor, 2013). *Ceteris paribus*, EMNE managers are more likely to opt for those countries where the local market institutions fit with their domestic mindsets. These countries are often rated as risky by institutional risk or political risk indices.

However, this is not to deny that EMNEs may have a home-country-based advantage. As emerging markets see constant and rapid evolution of competitive and regulatory conditions, EMNE managers have been required to attend regularly to the environmental changes for emerging opportunities (Helfat & Peteraf, 2015) and to the threats brought by certain institutions – institutions commonly featured in emerging countries in general (Cuervo-Cazurra, 2006; Ramos & Ashby, 2013). Managerial attention, their interpretations of environmental cues, and responsiveness to institutional changes drive firms' tendency to act on opportunities in other similar fast-growing markets (Dau, 2012; Del Sol & Kogan, 2007). This tendency may be further reinforced by a self-serving attribution of the positive home country performance, which is likely to be driven by the pro-market reform rather than the internal skills (Cuervo-Cazurra & Dau, 2009). In contrast, managers from developed countries are bounded by their ability to overcome the behavioural failures that prevent them from sensing cognitively distant opportunities conditioned by a different set of institutions from what they are familiar with (Gavetti, 2012). That said, while this superior cognitive capability of information search and processing may be a source of advantage that helps EMNEs tap into the growing developing country markets, it may not necessarily guarantee better performance of the firm.

### **3.4 A Microfoundational Framework of Risk-taking in FDI**

While employing the concept of managerial risk propensity can yield insights into the behavioural foundation of the firm-level internationalisation, the microfoundations approach needs to go beyond assigning explanatory primacy to individual attitude and preference (Barney & Felin, 2013). It is likely that managers' preference accounts for a non-trivial portion of the

variance in firms' internationalisation behaviour (Hutzschenreuter, Pedersen, & Volberda, 2007). Yet question remains as to whether the nature of the borrowed concept and its associated micro-level mechanism would change when applied to a specific social context (Felin, Foss, & Ployhart, 2015). Behavioural strategy literature draws simple analogy between organisational routines and individuals' mental representations in that history is retrieved as representation and patterns by individuals and as routines by organisations (Levitt & March, 1988). In the IB context, the way in which managerial cognition influences firms' FDI decisions is, more often than not, assumed rather than theorised (Aharoni, Tihanyi, & Connelly, 2011). Confusion arises as to whether individuals' cognitive capability and "mindfulness" (Levinthal & Rerup, 2006) remain a significant explanation in the organisational context (Gavetti, 2012). Although the risk propensity concept we draw upon has been tested in various managerial task settings (e.g., Sitkin & Weingart, 1995), a complete microfoundational framework would require the understanding of aggregation principles specific to the focal social context – i.e. how individuals' risk propensity transforms to organisational risk-taking decisions.

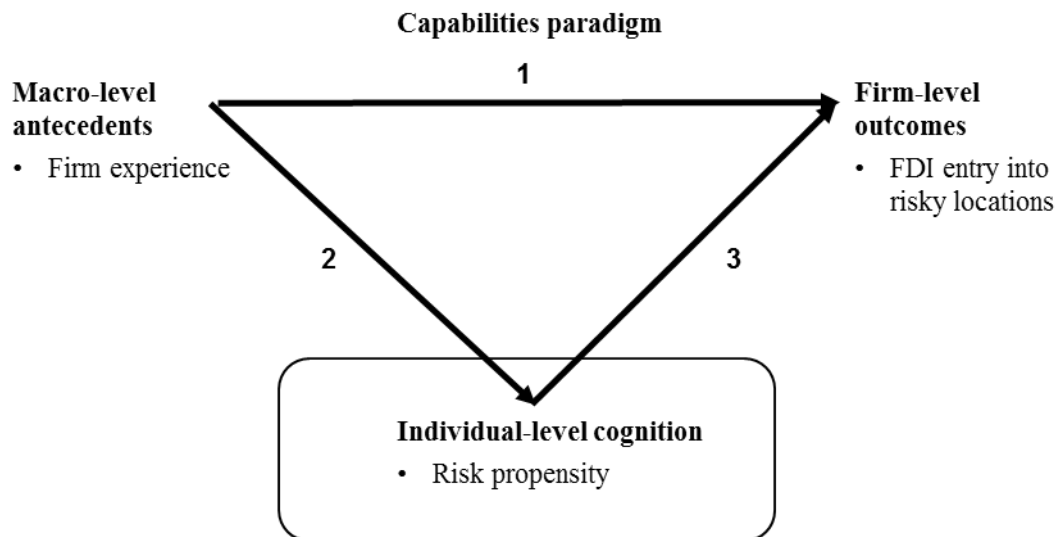
On the manager's side, a straightforward principle concerns how top managers formalise, legitimise, and alter decision rules at the organisation level. Individual decision heuristics imply a degree of codification and mindfulness (Bingham & Eisenhardt, 2011). Shared cognition is interpersonally negotiated in cases lacking the informational basis for foresight (Garud & Rappa, 1994). Transferring individual heuristics to organisation-level decision rules requires managers to convince other internal stakeholders of the efficacy of the personal heuristics and change their worldviews when meeting resistance (Gavetti, 2012). Skills are needed to persuade stakeholders that the opportunity presented falls into a specific mental representation as per experience. The manager's cognitive capability of influencing others' mental representations creates an important source of heterogeneity in organisation-level decisions. This capability may be of less importance in some organisational structures – for example in firms controlled by owner-managers.

On the organisation's side, the aggregation is hardly a linear function of its top managers' characteristics and backgrounds. Organisational context may both amplify and suppress the effect of individual cognition. Psychology research suggests that social interaction narrows the scope of cognitive thinking and analogy and thereby reduces the productivity of group discussion (Diehl & Stroebe, 1991). Diversity of beliefs among the top management team (TMT) may further hamper decision comprehensiveness and extensiveness (Miller, Burke, & Glick, 1998). Moreover, the social context of the corporate elite commonly sees managers engage in flattery and opinion conformity toward CEOs who have high social status in order to advance personal interests. This tendency amplifies CEOs' overconfidence about the efficacy of their past actions in strategic decision-making (Park, Westphal, & Stern, 2011). In contrast, firm-level monitoring arrangements are often put in place to override cognitive biases and align managerial behaviour to shareholders' interests. Monitoring is set to initiate controlled mental processing and a reality check on managers' personal beliefs as to the similarity of the focal context to previous ones and the validity of their self-serving attribution. A prominent monitoring arrangement is the board. CEO's power over the board determines the extent to which individual preference transfers to organisation-level decisions. Research shows that when performance declines, board of directors will increase their attention toward monitoring the CEO's behaviour while CEO duality reduces this tendency (Tuggle, Sirmon, Reutzel, & Bierman, 2010).

Aggregation does not just include checks and balances at the boardroom. On the one hand, conflict between organisational members arises when the manager insists that heuristic processing is necessary and effective in such strategic decision situations that information is ambiguous and time is pressing (Helfat & Peteraf, 2015). The transition from lower-level to higher-level is thus complicated by the circulation of power and political coalition within the organisation. Outcome history not only affects managers' risk propensity but also alters the distribution of power and influence among the members of the decision group. In the case of performance shortfall, the CEO's power will be contested by other senior management who

seeks to redefine the firm’s strategic agenda (Zhang, 2006). On the other hand, aggregation principles are not necessarily nested at the top management or board level. Travelling managers’ personal preferences, particularly based on experience of inconvenience in previous trips, may affect the investment location shortlist by shaping the way in which the advantages and disadvantages of potential sites are compiled and communicated to other organisational members (Schotter & Beamish, 2013; Welch, Welch, & Worm, 2007). This results in a different range of choice sets presented to top managers, which eventually contributes to the variance in the final decision.

**Figure 3 A meta-framework for understanding FDI risk-taking**



Adapted from Coleman (1990)

Figure 2 summarises the microfoundational framework of risk-taking in FDI. While the capabilities paradigm links the macro-level variables and organisational actions (arrow 1), the microfoundational framework (arrows 2–3) poses an alternative explanation based on individual-level cognition and risk propensity underlying the observed empirical regularity. Section 3.3 explicated how firm experience influences managerial cognition (arrow 2), which in turn accounts for the heterogeneity in firms’ FDI entry into risky locations. Section 4 complements this account by delineating the potential dynamics through which individual

managers' cognition may aggregate to organisation-level decision-making. This seeks to open the black box of the micro-macro link (arrow 3), and does not undermine the value of individual-level concepts and mechanisms (Felin & Foss, 2005). As with any scientific inquiry, the microfoundations research needs to be built on well-specified initial conditions (Barney & Felin, 2013). The individual is a natural initial condition in the studies of decision-making since the way in which individuals collect and process information guides the construction of choice sets among which the final decision is made. This is undoubtedly crucial in the light of increased CEO effect and manager fixed effects on firms' investment behaviour and performance (Bertrand & Schoar, 2003; Quigley & Hambrick, 2015). With arrow 3 in place, the individual-level account is no longer a mere source of heterogeneity but an indispensable mechanism in theorizing about the macro outcomes."

### **3.5 Implications for Future Research**

#### **3.5.1 *Microfoundations and FDI theories***

Major FDI theories have been criticised for the lack of microfoundations (Aharoni, Tihanyi, & Connelly, 2011). Both internalisation theory and the Uppsala model are founded on the static assumption of managerial risk preference in search of parsimonious theory building while downplaying the implications of variable risk preference. Given that both theories are essentially theories of managerial choice (Chiles & McMackin, 1996; Johanson & Vahlne, 1977), the search of microfoundations may benefit them in meaningful ways. We briefly illustrate how the microfoundational perspective based on risk propensity alters their prediction on entry mode and location choice.

#### ***Internalisation theory***

Internalisation theory views the firm as a stylised decision maker who makes the choice on organisational boundary while taking individuals' preferences and attitudes as given (Buckley & Casson, 1976, 2009). Nevertheless, Chiles and McMackin (1996) highlight the role



of managers who make the decision and argue that there are other behavioural bases for managerial actions that may interact with the economic rationality of cost minimisation. Others have explicitly called for relaxing the assumption of risk neutrality to enhance the validity of the theory in predicting the governance structure of MNEs (Buckley & Strange, 2011). Managers' risk preference may shift the switch point of asset specificity level at which hierarchical structure will be preferred. Yet in the FDI literature, little is known as to how managers' risk preference vary. Behavioural research on risk propensity effectively links experience with governance structure to provide an *ex-ante* predictor for boundary choice.

The difference between controllable risk and non-controllable risk suggests that not all experience can have an influence on risk propensity. Experience with natural disaster, technological failure and terrorist attack does not moderate the negative impact of such risk on subsequent foreign entry (Oetzel & Oh, 2014). For those who have beaten the odds in the past, successful passive response to non-controllable risk may be attributed to luck rather than competence (Clapham & Schwenk, 1991). One implication for internalisation theory is that the influence of experience on hierarchical structure vs. external market may be asymmetrical. Positive experience of partnerships, including joint venture, alliance and even low-integration acquisition can transfer from one of these contexts to another (Zollo & Reuer, 2010) so as to increase managers' tendency to take contractual risk, whereas dealing with non-controllable risk for wholly owned subsidiary does not encourage managers to take a similar risk in another country (Oetzel & Oh, 2014). As experience spillover is more commonly observed in partnerships, the breadth and heterogeneity of previous experience may be particularly relevant to contractual governance as opposed to hierarchical control (Jiménez, Luis-Rico, & Benito-Osorio, 2014; Powell & Rhee, 2015; Reuer, Park, & Zollo, 2002), leading economic determinism to be less accurate in predicting international cooperative venture formation (Hennart & Slangen, 2015; Tallman & Shenkar, 1994). In contrast, when non-controllable risks associated with market demand and macroeconomic turbulence become the dominant form of

risk in an FDI decision, internalisation theory is likely to remain a robust explanatory framework.

### *The Uppsala model*

The Uppsala model claims that managers are risk averse and have an inherently low level of maximum tolerable risk, which serves as the behavioural base for cautious, stepwise internationalisation patterns, in terms of both location and entry mode choice (Johanson & Vahlne, 1977). All else being equal, host country experience reduces liabilities of foreignness and enhances the probability of survival (Zaheer, 1995) whilst general international experience creates organisational routines, procedures and structures for cross-border venturing (Eriksson, Johanson, Majkgard, & Sharma, 1997). Both experiences encourage risk-averse managers to increase foreign market commitment (Johanson & Vahlne, 1990). However, behavioural research shows that managers' tendency to take risk is a dynamic concept and a function of outcome history. As a descriptive theory, the Uppsala model should take into account variable risk preference, and examine what leads some managers to be more or less averse to risk than others, and how empirical anomalies can be accommodated in this view.

Risk propensity suggests that managers are not uniformly averse to all type of risk at the start of the internationalisation process (Wu & Knott, 2006). MNEs can trade off one aspect of international risk against another while keeping the overall risk profile under control (Miller, 1992). Shrader, Oviatt, and McDougall (2000) find that small firms, often reflecting the lead entrepreneurs' behavioural tendencies, are able to achieve accelerated internationalisation in the absence of significant network resources by balancing out the risks of the country entered, the mode of entry used, and the proportion of total firm revenue exposed to the risks of that country. Following this logic, managers with successful inward internationalisation experience – e.g. partnering up with foreign investors in the home country – may be less averse to contractual or dissemination risk so that they are more inclined to venture into distant locations and balance the overall project risk by means of joint venture entry, compared to inexperienced managers.

Moreover, EMNE managers with successful domestic internationalisation experience – i.e. venturing into the heterogeneous regional markets within the national border (Wiedersheim-Paul, Olson, & Welch, 1978) – may be less deterred by political and regulatory risks when expanding to another developing country. These microfoundational mechanisms rested on home country experience provide alternative but well-founded explanations for the empirical anomalies to the model prediction, which so far have been partly attributed to firms' entrepreneurial orientation and entrepreneurs' intrinsic risk seeking preference (Oviatt & McDougall, 2005b). Moreover, performance feedback in certain host countries and organisational performance pressure may induce managers to reverse the progressive internationalisation (Garcia-Canal & Guillén, 2008). It is reasonable to expect the proposed learning process to be more complicated and flexible when managers' cognitive processes, abilities and biases are accounted for (Petersen, Pedersen, & Lyles, 2008; Zollo, 2009).

### ***3.5.2 Directions for empirical research***

Current individual-level research agendas are driven by the contention that individual cognition accounts for a non-trivial portion of the variance in organisations' decisions. While this is by all means a valid claim, research is predicated on the automatic reflection of lower-level actions in higher-level outcomes. We call for more process research for two reasons. Firstly, cognition is essentially a process – a process of attending, remembering and reasoning (Helfat & Peteraf, 2015). Much of the heterogeneity occurs through different stages of this process. For example, when it is documented that outcome history influences risk propensity, what dimension of performance managers attend to is less clear. The attention-based view points to the plurality of goals (Ocasio, 1997), and a variety of performance metrics are considered relevant by different managers (Richard, Devinney, Yip, & Johnson, 2009). Moreover, multiple realisation is possible – meaning that different combinations of two or more accounts can lead to the same organisation-level outcome (Greve, 2013). The positive relationship between experience and imitative behaviour may be due to ritualistic response, local search or performance-driven adaption (Haunschild & Sullivan, 2002; Zollo, 2009). Each

is an internally consistent account at the individual level. Experimental design is required to examine the competing explanations of risk-taking behaviour in FDI so as to identify how they interact and under what conditions any of them would prevail (Devinney, 2013). Secondly, aggregating individual-level cognition to group-level decisions requires in-depth investigations into the decision process. In cases lacking direct evidence of this process, the debate over the preferred level of analysis for behavioural strategies can never be settled (Greve, 2013). The process of social interaction within the decision-making group, of communicating the attribution of previous performance and of persuading other internal stakeholders is of much importance in and of itself, and can hardly be revealed by a correlational analysis. For instance, the shifting of attention among performance metrics has direct implications for risk propensity, and is a dynamic process to be captured only by longitudinal observations.

### **3.6 Conclusions**

Explaining FDI has been the central inquiry of IB research for decades and risk and uncertainty are widely regarded as key determinants by researchers. In this chapter, we draw attention to the extant empirical studies and seek to provide an alternative theorisation. We conclude that a microfoundational perspective can advance the studies of international risk and contribute to the understanding of FDI.

Taking up the call by previous researchers to reconsider risk and uncertainty for IB inquiries (Liesch, Welch, & Buckley, 2011), we review the way in which IB scholars use *ex-ante* risk to explain FDI decisions. Two dominant approaches are identified – i.e. organisational risk-taking and managerial risk preference – through which the current knowledge on FDI risk-taking is generated. The organisation-level approach suggests that MNEs' responses to host country risk vary depending on their experience, which essentially reflects varying level of firm capability. This explanation dominates the current debate as to why EMNEs can internationalise in the absence of conventional firm-specific resources (Cuervo-Cazurra, 2011). The individual-

level approach suggests that managers' traits and characteristics including personal history shape their cognition, which account for a significant portion of variance in the firms' FDI decisions. Despite the numerous insights they yield, both approaches draw heavily on *post hoc* rationalisation of firms' behaviour. The organisation-level account is open to many alternative explanations whereas the individual-level account does not unveil the theoretical mechanisms underlying the link between macro variables.

In response, we draw upon the meta-framework of microfoundations to reformulate the theoretical relationship between firm experience and risk-taking. The first step is to recognise the importance of the managers as the most proximate cause of firm decisions. Despite some scholars' persistent calls, individual-level research is still under-represented in IB (Aharoni, Tihanyi, & Connelly, 2011; Buckley, Devinney, & Louviere, 2007; Maitland & Sammartino, 2015b). We argue that the individual-level account is particularly necessary in the studies of FDI risk-taking since country risk or political risk indicators do not account for the fact that managers hold heterogeneous probability distributions of future outcomes as a result of their divergent perceived ability to control the risk. Recent research on managerial mental representation has recognised the contribution of individual cognition to FDI decisions (Maitland & Sammartino, 2015b; Williams & Grégoire, 2015). However, theory is lacking in depicting the micro-level mechanism. To address this problem, we employ the concept of risk propensity to delineate how contextual variables and particularly experience influence individual managers' risk-taking tendency. Cognition research has proposed competing theories and established valid evidence on the causal effect of experience on risk propensity. The effect is most significant when the experience involves performance feedback in the same decision context and the risk situation is subject to managerial control rather than being strictly exogenous (Bateman & Zeithaml, 1989; Osborn & Jackson, 1988; Sitkin & Weingart, 1995). Interpretation of prior experiences as to how effective the coping mechanisms used would be in a given institutional environment underpins the change in risk propensity and leads to the imitation of previous actions when entering a new country (Henisz, 2003; Tallman, 1992).

Individual-level overconfidence and erroneous generalisation of experience are well documented in the literature, and may serve as microfoundations for the observed regularity between organisation-level collectives, which so far has been accounted for by the capabilities paradigm at the macro-level. We also show that nesting the relationship between experience and risky FDI at the individual-level does not necessarily rule out EMNEs' unique advantages compared to their developed country counterparts when investing abroad.

Although behavioural decision theory provides much needed guidance for the inquiry into FDI risk-taking, it does not explicate to what extent and how managerial cognition contributes to firm-level strategic decisions. The microfoundational framework calls for a dedicated account as to how the lower-level account aggregates to higher-level outcome in a specific social context. Given the idiosyncratic experience at the individual-level, the simplest aggregation principle would be to weight each TMT member's personal experience (Athanassiou & Nigh, 2002). Yet it begs the question why individuals are found to have all sorts of biases while the economic theory based on rationality seems still supported by the data. We seek to complete the logic chain from firm experience through managerial cognition to firm decisions by incorporating micro-macro transitional processes into our framework. For example, the power dynamics at the top management level determine the extent to which individual preferences and beliefs can transfer to the organisational decisions. In other words, group decision-making is not necessarily less biased. Even if group decision-making in the boardroom can effectively alleviate calculus flaw in the final decision, the information input to that calculus is often collected by frontline managers that carry cultural biases and self-interests motivations. This is particularly prevalent in MNEs' decision-making since location evaluation would inevitably require travels and the travelling managers can intervene organisational decisions at the early stage by filtering out the locations they dislike (Schotter & Beamish, 2013).

Early research explicitly recognises that internationalisation decision-making is as much of a behavioural process influenced by managers' preferences and attitudes to risk-taking as it is

of rational calculation (Aharoni, Tihanyi, & Connelly, 2011; Reid, 1981). However, the resource-based view and the capabilities paradigm have directed researchers' attention away from micro-level mechanisms. It is our hope that the recent cognition research on FDI and the microfoundations approach can ignite the interest in the managerial processes underlying MNEs' global expansion.

In the following chapter, we build upon our microfoundational framework and the associated theoretical mechanisms, and focus on the link between firm experience and managerial cognition. Specifically, we examine whether risk propensity can be tested empirically and improve our understanding of FDI location choice. Drawing upon discrete choice method, we elicit from a group of Chinese managers their preferences for controllable and non-controllable risks associated with potential investment locations. Particular attention is paid to the heterogeneity among managers in their risk propensity and to unveiling how contextual variables include domestic experience and firm characteristics account for this heterogeneity. The individual-level research methods allow us to provide the first evidence on the cognition based lower-level mechanism we have proposed in this chapter.

## 4 RISK PROPENSITY IN THE FOREIGN DIRECT INVESTMENT LOCATION DECISION

### 4.1 Introduction

Foreign direct investment is inherently risky because changes in the political, institutional, economic, and social environment in foreign countries may engender a loss of profits or assets (Cosset & Roy, 1991) and reduce the chance of survival (Mitchell, Shaver, & Yeung, 1992). Although previous research on entry strategy finds consistent evidence that MNEs tend to avoid the exposure to countries with significant international risk – particularly institution-related risk (Delios & Henisz, 2000; Delios & Henisz, 2003b), foreign investment into high-risk countries has been growing more rapidly than ever (Feinberg & Gupta, 2009). Nevertheless, conventional FDI theory is built on calculative, economic thinking that assumes managers are risk-neutral, and only comparative returns of location options matter (Buckley & Strange, 2011). FDI research has paid significantly more attention to location advantages, revolving around the economic implications of a range of host country environment attributes (Buckley, Devinney, & Louviere, 2007), while largely bypassing the study of international risk (Strange, Filatotchev, Lien, & Piesse, 2009).

Recent literature on FDI shows a resurgent interest in explaining MNEs' expansion into high-risk countries (Driffield, Jones, & Crotty, 2013). Firms with considerable experience in high-risk countries are shown to accommodate institution-related risks better in subsequent entries (Delios & Henisz, 2003a; Delios & Henisz, 2003b). Using the concept of “firm capability” and “organisational learning”, this literature has made important contributions to our understanding of the relationship between firm experience and FDI location choice (Jiménez, Luis-Rico, & Benito-Osorio, 2014; Lu, Liu, Wright, & Filatotchev, 2014). In particular, the expansion of EMNEs into high-risk countries has been attributed to the political capabilities nurtured in the home country where firms have to cope with underdeveloped institutions



(Cuervo-Cazurra, 2006; Cuervo-Cazurra & Genc, 2008; Del Sol & Kogan, 2007; Holburn & Zelner, 2010).

However, it is managers who ultimately make the strategic decisions while the firm-level theorisation of high-risk location choice inevitably leaves little room for managers' nature, abilities, propensities and heterogeneity – the microfoundation of firm strategy (Felin & Foss, 2005). Both organisational learning theory and cognitive research argue that managers' views on the applicability of previous experience and capability in the focal context play a role in the way they make strategic decisions (Gavetti, Levinthal, & Rivkin, 2005; Jones & Casulli, 2014; Williams & Grégoire, 2015). What also matters is how managerial preference evolve as a function of previous experience (Bingham & Eisenhardt, 2011; Garcia-Canal & Guillén, 2008; Maitland & Sammartino, 2015a; Sitkin & Pablo, 1992). Managers should therefore be seen as a source of variance in firms' FDI decisions, rather than to “discuss the actions of firms without recourse to the vehicle by which those actions are decided” (Devinney, 2011: 64).

The managerial role in extant internationalisation theories is primarily accounted for by a simplifying assumption about their risk preference. The Uppsala model of the internationalisation process claims that managers are risk-averse and have an inherently low level of maximum tolerable risk (Johanson & Vahlne, 1977), whilst international entrepreneurship (IE) researchers contend that managers of international new ventures are inherently risk-seekers (McDougall & Oviatt, 2000; Oviatt & McDougall, 1994). Both schools seem to infer the *ex-ante* influence of risk on foreign investment decision making from *ex-post*, after-equilibrium firm behaviour (Liesch, Welch, & Buckley, 2011). Hence, problems arise as managerial preference may not conform to the logic and structures that researchers impose on the observed strategies. To address the tension between IB scholars' intrinsic interest in the role of risk in MNEs' decision processes and the common *ex-post* measurement of risk (Belderbos, Tong, & Wu, 2014; Reuer & Leiblein, 2000; Tong & Reuer, 2007), we borrow the concept of risk propensity from behavioural decision research (Pablo, Sitkin, & Jemison, 1996; Sitkin &

Pablo, 1992; Sitkin & Weingart, 1995). Risk propensity refers to an individual's current tendency to take specific risks as a function of previous experience and other contextual variables. Unlike dispositional risk preference, risk propensity reflects unobservable learning and cognitive process. Managers' own interpretation of experiential learning induces them to deploy their knowledge in other host countries with similar characteristics and select investment locations that would appear unwarrantedly risky to the researchers (Perkins, 2014). In this chapter, we examine the heterogeneity of managers' risk propensity in location choice using quasi-experimentation on top managers. To contrast with the existing literature on EMNEs' domestic learning, we choose emerging country as the primary research setting and focus specifically on Chinese private manufacturing firms.

We contribute to the literature on location choice in three respects. First, by delineating individual level variation among managers, we move beyond the calculative, rational-actor perspective assumed by economic theories (Devinney, 2011). Even when managers are assumed to be utility maximisers, there is latent preference heterogeneity unobservable in previous economic analyses based on singular models (Chung & Alcacer, 2002). Thus, we complement current location research with a theoretical mechanism of managerial preference (Schotter & Beamish, 2013), which channels the effect of economic and institutional factors (Kang & Jiang, 2012; Staw, 1991). In addition, managers are found to place varying weights on controllable versus non-controllable environmental characteristics. The various aspects of international risk provide a distinct case for IB scholars to contribute back to the behavioural decision theory in which risk is mostly a monolithic concept (Pablo, Sitkin, & Jemison, 1996; Sitkin & Weingart, 1995).

Second, we address a neglected weakness in FDI theories. Current theories presume that individual managers hold a stable and unchanging attitude toward risk-taking (Buckley & Strange, 2011), and this static preference guides the way firms select investment locations given the external environment (Johanson & Vahlne, 1977; Oviatt & McDougall, 1994). While

previous studies made tentative inferences about the dynamic nature of managerial risk aversion (Garcia-Canal & Guillén, 2008), we extend this by directly examining managers' *ex-ante* views on risk, i.e. risk propensity. We show that experimentation provides a unique method for testing risk propensity – as reflected in the utility parameter – to complement the *ex-post* downside risk measure (Miller & Leiblein, 1996; Mudambi & Swift, 2014). Our evidence suggests that perceived past success rather than the familiar notion of the stock of international experience leads to heterogeneity in managers' risk propensity as regards FDI location choice. We complement the organisational learning literature on how managerial preference evolves as influenced by experience-based heuristics (Bingham & Eisenhardt, 2011; Maitland & Sammartino, 2015a). Further, the concept of risk propensity allows us to provide an alternative test for the effect of firm-level contextual variables such as slack on *ex-ante* risk-taking. We contribute to the slack literature by clarifying its facilitating role in taking on non-controllable risk as opposed to controllable risk.

Third, we contribute to the growing literature on EMNEs' foreign expansion. Extant research argues that EMNEs, having experienced weak institutions do not shy away from foreign countries with substantial institutional risks (Cuervo-Cazurra, 2011; Cuervo-Cazurra & Genc, 2011; Holburn & Zelner, 2010). However, we find that managers view the institutional environment as composed of different aspects and the alleged learning effect derived from home country experience is not consistent across these aspects. Domestic learning may attenuate managers' propensity to avoid one type of institutional risk but accentuate another, depending on the risk being controllable as against non-controllable. The finding extends previous studies that tend to overgeneralise the role of institutional embeddedness in propelling expansion to high-risk countries. The behavioural perspective we adopt enriches the extant research on the role of home country institutions in facilitating Chinese firms' outward FDI, which has primarily revolved around government support (Cui & Jiang, 2012; Luo, Xue, & Han, 2010) or advancement in market-supporting formal rules (Sun, Peng, Lee, & Tan, 2014). Further, by distinguishing between controllable and non-controllable risk, we test the boundary of prospect

theory in the context of managerial decision making. As prospect theory was developed in such task settings that odds are exogenously given, the loss aversion thesis is more likely to hold when non-controllable, external threat is involved (Holmes, Bromiley, Devers, Holcomb, & McGuire, 2011). Conversely risky behaviour is more likely when managers perceive a sense of control over the risk in question (George, Chattopadhyay, Sitkin, & Barden, 2006).

The next section summarises the theories that IB scholars employ to explain the effect of experience on high-risk FDI behaviour, and points out how the individual level theorisation can complement the firm-level, capability-based view by taking into account managers' own interpretation of information and *ex-ante* view on risk. We then introduce the concept of risk propensity that can integrate the streams of individual level perspectives and establish the theoretical link between contextual variables and FDI risk-taking. On that basis, we hypothesise why managers may vary in their views on risk and attribute the latent heterogeneity to home country learning and the firm's potential slack. The conclusion and discussion section emphasises how our study sheds new light on FDI location research.

## **4.2 Literature Review**

### **4.2.1 *Organisational learning theory***

Organisational learning theory proposes that experience is the primary source for acquiring new knowledge (Huber, 1991) and the key path through which capabilities can be developed (Fiol & Lyles, 1985). Direct experience confers on organisational members the knowledge of action-outcome relationships and of the environmental impact on this relationship (Duncan & Weiss, 1979). Drawing upon the learning perspective, IB scholars have developed the Uppsala model and the knowledge-based view to examine the interplay between experience, knowledge and internationalisation behaviour (Johanson & Vahlne, 1977; Kogut & Zander, 1993). It is posited that international experience facilitates the acquisition of tacit knowledge about foreign markets and the process of cross-border operations, thereby reducing the

perceived risk of further expansions (Delios & Henisz, 2000). This argument provides the theoretical reasoning underlying the relationship between experience and high-risk FDI. However, it begs the question whether knowledge transfer is bounded by national borders (Nadolska & Barkema, 2007). The general international experience accumulated across countries is not always useful in subsequent investment (Barkema, Bell, & Pennings, 1996). Eriksson, Johanson, Majkgard, and Sharma (1997) propose that different types of knowledge are sourced from different types of experience. An overarching premise is that learning effectiveness depends on the relevance of specific experiences (Delios & Henisz, 2003b; Maitland & Sammartino, 2015a; Perkins, 2014). In the FDI context, its relevance is often associated with cultural values as the perceived fungibility of experience is determined by the cultural similarity between home and host countries as well as between previous and the current focal host countries (Barkema, Bell, & Pennings, 1996; Hong & Lee, 2015).

Recent IB research has focused on the institutional environment since firms' ability to grapple with weak institutions is considered an important ownership advantage for success in high-risk host countries (Buckley, Clegg, Cross, Liu, Voss, & Zheng, 2007; Henisz, 2003). The non-market capabilities sourced from experience arguably take shape based on the human capital, organisational structure and social capital developed to tackle institutional idiosyncrasies during previous operations in risky countries, and are assumed to be fungible across risky countries with similar institutional conditions (Feinberg & Gupta, 2009; Perkins, 2014). Extending the cultural similarity logic, researchers propose that EMNEs enjoy a congenital edge in expanding into high-risk countries as they may have already fostered the skills and know-how of navigating institutional constraints through years of home country venturing (Cuervo-Cazurra & Genc, 2011; Driffield, Jones, & Crotty, 2013). Empirical research reveals that FDI from countries with high corruption levels is evidently clustered in other corrupt countries (Cuervo-Cazurra, 2006), while firms from countries with organised crime problems proactively seek business opportunities in other countries with persistent organised crime (Ramos & Ashby, 2013). Experience in politically hazardous countries moderates the

negative effect of a host country's political hazards on rates of FDI entry into that country (Delios & Henisz, 2003b).

This literature does not directly examine what is learned from experience but rather attributes the relationship between experience and subsequent firm behaviour to unobserved capabilities (Bingham, Eisenhardt, & Furr, 2007). The inherited knowledge and home country imprint cannot always transfer to other similar markets (Giarratana & Torrisci, 2010), and experience of engaging with local stakeholders does not automatically lead to expertise in political hazard assessment (Maitland & Sammartino, 2015a), implying that simply gaining experience is not sufficient for learning (Haleblian, Kim, & Rajagopalan, 2006). Strategy research suggests that firms in fact learn from experience a set of "simple rules" heuristics, including where to locate value adding activities, as managers become cognitively sophisticated over time (Bingham & Eisenhardt, 2011). Insights into experiential learning are generated when researchers delve into the rules by which managers evaluate environments and select among alternative opportunities (Maitland & Sammartino, 2015a). Despite the growing body of IB literature from the learning perspective, the puzzle remains as to how experience in risky countries influences subsequent investment.

#### ***4.2.2 Managerial perspective***

While organisational learning is by definition a firm-level process, some studies essentially treat it as a country level phenomenon where firms from one environment are compared against those from another on the inclination to invest in high-risk countries (Cuervo-Cazurra & Genc, 2008; Driffield, Jones, & Crotty, 2013). The missing element is the role of managers who ultimately make the strategic decision as to where the firm locates its foreign subsidiaries (Schotter & Beamish, 2013). Early export research recognises that the internationalisation decision is as much a function of managerial behaviour as it is of firm and environmental characteristics (Dichtl, Koeglmayr, & Mueller, 1990). The influences of managers' personal characteristics, experience, cognitive styles, managerial behaviour such as

expectations, aspirations and attitudes, and their country-of-origin (in which cultural norms and belief systems are rooted) are undeniable (Leonidou & Katsikeas, 1996). Much of the later discussions have been raised by IE scholars as to how managers' personal experience, as a source of congenital knowledge (Huber, 1991), can compensate for the lack of ownership advantages (Luo, Zhao, Wang, & Xi, 2011). Within the IB field, however, little attention has been paid to individual level research (Aharoni, Tihanyi, & Connelly, 2011). One exception is Schotter and Beamish (2013: 529) who find that "personal managerial preferences play a significant role in MNE location decisions".

Two recent developments may fill the theoretical gap and revive the focus on the individual. First, researchers have drawn upon the cognitive theory to explain why some experiences matter and others do not. Evidence suggests that experience could prompt internationalisation as managers overestimate the efficacy of prior strategies and fall prey to competency trap (O'Grady & Lane, 1996; Petersen, Pedersen, & Lyles, 2008; Zeng, Shenkar, Lee, & Song, 2013; Zollo, 2009), as well as inhibiting internationalisation as they lack trust in the applicability of previous knowledge and capabilities in dealing with the presenting environmental hazards (Duanmu, 2012; Hong & Lee, 2015). Whether prior experience is of value depends on managers' interpretation of the acquired information and knowledge (Huber, 1991) and how they understand new investment contexts (Lamb, Sandberg, & Liesch, 2011; O'Grady & Lane, 1996). There are a range of contextual signals from which managers can infer their capabilities and obtain the sense of confidence (Chatterjee & Hambrick, 2011). Even within the same organisation, managers do not necessarily share the same cognitive map about the causal relationship between actions and outcomes (Fiol & Huff, 1992; Maitland & Sammartino, 2015a). Some are more inclined to attribute past success to their own ability than to the environment or luck (Clapham & Schwenk, 1991), and others may overweight the positive signals of efficacy while ignoring negative performance indicators (Chatterjee & Hambrick, 2011). Unlike gambling or laboratory experiments, there is scope for managers to establish their own estimations of future events. Although commonly employing analogical

reasoning to appraise the new task, managers may differ in their assessments about the surface and structural similarity between previous contexts and the focal one (Haleblian & Finkelstein, 1999; Williams & Grégoire, 2015), and in the extent to which they are able to reconfigure the existing resources to adapt to the new environment (Jones & Casulli, 2014). The information top managers receive may have already been coloured by the travelling managers who interpret the raw information based on their own experience (Schotter & Beamish, 2013). An observed firm decision is thus the outcome of the complex processes of managers identifying potential hazards, interpreting external environmental cues and acting on that interpretation (Rodriguez, Uhlenbruck, & Eden, 2005).

Second, the individual level perspective has complemented firm-level theories in explaining why MNEs vary in risk-taking. Previous treatment of managerial risk in FDI theories centred on risk preference (Filatotchev, Strange, Piesse, & Lien, 2007; George, Wiklund, & Zahra, 2005; Strange, Filatotchev, Lien, & Piesse, 2009). Managers are assumed to be risk-neutral, risk-averse or risk-seeking in internalisation theory (Buckley & Strange, 2011), the Uppsala model (Figueira-de-Lemos, Johanson, & Vahlne, 2011; Johanson & Vahlne, 1977) and IE research (McDougall & Oviatt, 2000; Oviatt & McDougall, 1994) respectively. These assumptive views contain two problems. Firstly, researchers tend to impose risk measures on managers and derive their risk preference from *post hoc* rationalisation of actual investment (Liesch, Welch, & Buckley, 2011). In the Uppsala model, risk aversion is reflected in the foreign entry sequence taken by the firm where psychically distant countries are defined as riskier compared to neighbouring countries (Johanson & Vahlne, 1977). Likewise, IE researchers derive entrepreneurs' propensity and capacity to withstand substantial risks from the "entrepreneurial" actions of their firms, often in terms of internationalisation speed and scope (Freeman, Edwards, & Schroder, 2006). However, evidence in entrepreneurship and IE research implies that managers could be erroneously classified as risk-seeking according to ungrounded criteria for decision "riskiness". While researchers assume entrepreneurs as risk-seekers based on the assumption that business venturing poses greater financial risk than employment



(Busenitz, 1999), it is found that entrepreneurs do not have an intrinsic preference for risk but instead perceive venture formation to be well under control, possibly due to ignorance and overconfidence (Miner & Raju, 2004; Simon, Houghton, & Aquino, 2000). Rather than knowingly take risks as researchers assume, entrepreneurs tend to label business situations as opportunities as opposed to threats (Palich & Bagby, 1995). Female entrepreneurs are particularly reluctant to identify themselves as risk-takers, and stress that the apparently risky internationalisation is little more than calculated, cautious move (Welch, Welch, & Hewerdine, 2008). Likewise, while rapid foreign entry of small and medium sized enterprises (SMEs) and born-global firms is viewed by researchers as risk-taking (George, Wiklund, & Zahra, 2005), managers are found to employ a number of relational and portfolio strategies to keep the overall risk tolerable, pointing to a risk averse tendency (Freeman, Edwards, & Schroder, 2006; Shrader, Oviatt, & McDougall, 2000). Secondly, risk preference is viewed exclusively as a dispositional trait that holds constant across contexts for the convenience of theory building (Buckley & Strange, 2011; Oviatt & McDougall, 2005a). This convention leaves little room in the extant theories for the dynamics and heterogeneity of managers' risk-taking tendency.

#### ***4.2.3 Behavioural decision theory and risk propensity***

Built upon cognitive psychology, behavioural decision theory studies the “human factors” that cause individual decision makers to vary in risk-taking behaviours (Shapira, 1995). The application of the theory in the strategic decision context is driven by the researchers' belief that only when taking into account managers' own perspectives would the study of risk bear fruit (March & Shapira, 1987).

Behavioural decision theorists argue that individual risk-taking may be driven by two main forces. First, according to applied psychologists, different managers have different dispositional preference for risk as a manifestation of their personality (Stewart & Roth, 2001), and there is a spectrum from risk-averse through risk-neutral to risk-seeking along which any individual has an own place (Jackson, Hourany, & Vidmar, 1972; MacCrimmon & Wehrung,

1990). Some are fundamentally more inclined to take risk in many life domains (Weber, Blais, & Betz, 2002), while others only become risk-seeking in chasing business opportunities (Busenitz & Barney, 1997). The Uppsala model, explicitly assuming managerial risk aversion, does not rule out the possibility that there are inherently risk-willing managers who consistently view uncertain foreign markets as unknown yet promising opportunities (Johanson & Vahlne, 2006).

Second, behavioural theorists stress the importance of contextual influences in shaping individuals' risk-taking tendencies (Weber & Milliman, 1997). Prospect theory posits that the contextual framing of the risk may convert an inherently risk-averse individual to a risk-seeking one (Schoemaker, 1990). The behavioural theory of the firm proposes that managerial risk-taking is affected by such firm characteristics as resource slack, organisational decline and attainment discrepancy (March & Shapira, 1992; Wiseman & Gomez-Mejia, 1998). In addition, owner-managers of small firms are predisposed to avoiding risk as their personal wealth is substantially exposed to the possible financial distress associated with the potential investments, whereas managers of large firms can bear risk and pursue investment return or other strategic goals on behalf of the shareholders for whom the firm is part of a well-diversified portfolio (Liesch, Welch, & Buckley, 2011). Managers' compensation arrangements also influence risk-taking by mitigating the monetary consequence of risky strategic decisions, as suggested by the behavioural agency model (Gray & Cannella, 1997). These contextual influences prompt behaviourists to attribute apparent risk-taking to managers' risk propensity – i.e. the current, variable tendency to take a specific risk – as opposed to dispositional risk preference (George, Chattopadhyay, Sitkin, & Barden, 2006; Sitkin & Pablo, 1992; Sitkin & Weingart, 1995).

The strongest contextual influence, however, arises from the outcome history of prior experience (Osborn & Jackson, 1988; Sitkin & Weingart, 1995). On the one hand, managers with unfavourable experience may amplify the external factors leading to asset loss or negative performance, and overestimate the eventuality of those factors, whilst continuous success in the

past leads to a biased representation of the reality and thereby distorted estimation of the distribution of future outcomes and the impacts on business operations (Levinthal & March, 1993; Martins & Kambil, 1999). On the other hand, past performance provides important feedback to managers about their ability to enact the environment in their own favour (Haleblian, Kim, & Rajagopalan, 2006; March & Shapira, 1987) and the effectiveness of the coping strategies they have employed in controlling the risks, thus directing future firm behaviour (Lant, Milliken, & Batra, 1992; Levitt & March, 1988). Successful experience may further enhance managers' self-confidence in tackling similar high-risk tasks in the future (Zollo, 2009).

#### ***4.2.4 Risk Propensity and Managerial Decision Making***

C Conventional IB theory rests upon the assumption of dispositional risk preference in the sense that managers' intrinsic proclivity for risk guides the way in which they respond to potential host country environmental risk when making location and entry mode choices (Buckley & Strange, 2011; Johanson & Vahlne, 1977). It implies that managerial risk preference intervenes between the environment and the organisational decisions. However, research suggests that dispositional trait is not a reliable predictor of individuals' risk-taking tendencies in business tasks (Simon, Houghton, & Aquino, 2000), partly because it contains insufficient variation among top managers given the selection processes for corporate leaders (Hitt & Tyler, 1991) and partly because of the complex context of organisations (Shimizu, 2007; Wiseman & Gomez-Mejia, 1998). It is observed that the appetite for risk for a given individual could vary depending on the decision domain, suggesting the importance of situational differences (Weber, Blais, & Betz, 2002). As an alternative concept, risk propensity incorporates the influence of both trait and the context. If managers' responses to environmental risk are indeed found to be affected by firm level and individual level contextual variables as behavioural theory posits, we argue that risk preference is not the only contributor to one's current tendency to take risk. This circumvents the debate on managers being risk averse *vs.* risk seeking, and allows for comparison across managers on the extent of risk-taking tendency regarding a particular task. The concept is also well aligned with the heuristics view in the

organisational learning literature because managerial preference regarding risk-taking constitutes a coherent cognitive structure for dealing with a range of similar problems without reference to the details of any specific ones (Bingham & Eisenhardt, 2011). Thus risk propensity conjoins the information interpretation research and managerial perspective on risk-taking, and provides an alternative theoretical explanation for the heterogeneity in FDI decisions.

Nevertheless, the lack of empirical testing has inhibited the development of risk propensity perspective. Unlike risk preference which can be explicitly measured by psychometric scales, risk propensity cannot be captured independent of individuals' behaviour. Rarely is objective criterion available for gauging the riskiness of a business option (Baird & Thomas, 1985), and, as shown, researchers' *post hoc* rationalisation of firm behaviour may not well represent the *ex-ante* role of risk in strategic decision making. Conventional methods thus fail the study of risk propensity in the organisational context. Our study offers a unique method to operationalise risk propensity, which is then linked with contextual variables.

### **4.3 Development of Hypotheses**

Our focus on the concept of risk propensity leads the hypotheses to discuss why some are less averse to a given risk than others. The various aspects of international risk provide a distinct case for studying managerial heterogeneity in risk propensity. In this section, Hypotheses 1 and 2 highlight the difference between managers with particular regard to inter-person variation in the perceived importance of a given aspect and intra-person variation in the perceived importance of controllable versus non-controllable aspects. Support of these two hypotheses serves as the precondition for Hypothesis 3 and 4 by which we examine whether the heterogeneity is attributable to firm level and individual level contextual influences.

#### ***4.3.1 Heterogeneous risk propensity in location choice***

Although the trait approach and behavioural theory provide well-grounded accounts of managerial risk propensity, they apparently assume its monolithic nature in that managers are presumably more or less averse to environmental risk as a whole. Given the complexity of foreign investment, IB literature not only recognises the magnitude of international risk but also specifies its variety of aspects. Miller (1992) proposes a comprehensive consideration of international risk, including general environment, industry and firm specific aspects. When making location choices, MNE managers trade off one aspect of international risk against another while keeping the overall risk profile under control. This framework provides a natural context in which risk propensity can be fine-sliced to a number of specific aspects.

Behavioural decision research observes that different managers pay attention to different aspects of the information provided when evaluating the riskiness of a given decision option (Weber & Milliman, 1997). Very few managers engage a calculative thinking and most instead rely on “gut feeling” in FDI decision making (Calof, 1993). Gut feeling in fact represents a complex, implicitly rational process that draws upon managers’ knowledge and experience, and is underpinned by analogical and heuristic reasoning (Bingham & Eisenhardt, 2011; Jones & Casulli, 2014). The extent to which analogical reasoning can be applied effectively depends on the structural similarity between previous experience and the focal context (Perkins, 2014; Williams & Grégoire, 2015). Experiential learning regarding, for instance, tackling contractual disputes with local suppliers, bears little relation to coping with operational disruption resulting from political turbulence and abrupt policy changes in the host country. Regardless of the relative importance of different aspects of international risk, some managers may be more averse to one and less averse to another – as a function of their context-specific experience – rather than displaying a monolithic risk-averse or risk-seeking disposition as suggested by the trait approach. Likewise, contextual influences other than experience may have a similar effect. The “house money” effect originally observed in a gambling context may

be primarily associated with such risk that has an exogenous given odds. Therefore, we suggest an inter-person variation in risk propensity regarding a given aspect of international risk.

**Hypothesis 1:** Managers vary in their risk propensity in FDI location decisions, such that one can be simultaneously more averse and less averse to risk than another manager, depending on the specific aspects of international risk being discussed.

The decision models developed by Devinney, Midgley, and Venaik (2003) suggests that managers hold distinct views on the basic value of one aspect of risk relative to another, independent of their subjective assessment about the level of each aspect of risks with regard to any specific market. Such views represent the dominant logic through which managers scan external conditions and diagnose environmental constraints (Thomas, Clark, & Gioia, 1993), regardless of whether they over-, under- or mis-estimate the importance of any particular aspects (Kiesler & Sproull, 1982). One reason underlying the varying importance of different risks may be managerial control. Unlike gamblers, managers believe that riskiness of a choice in managerial situations can be controlled by their skills, talents and capabilities (March & Shapira, 1987). Risk propensity is essentially reflective of managers' self-assessed ability to control the risk in the particular decision context based on performance feedback and experiential learning (Chatterjee & Hambrick, 2011). The extent to which a risk is controllable vis-à-vis exogenously given influences managers' tendency to avoid the risk. Controllable risk is risk of which the probability and impact can be decreased by managerial actions. Positive experience with and familiarity of controllable risk increase the likelihood of subsequent entry (Delios & Henisz, 2003b; Holburn & Zelner, 2010). Non-controllable risk, however, can hardly be manipulated by the firms or managers, and is predominantly resolved by the passage of time (Cuypers & Martin, 2009). Besides, magnitude of potential loss is viewed as the dominant element of risk associated with a strategic decision (March & Shapira, 1987). Insofar as managers can control some specific aspects of international risk – for instance mitigating contractual hazard through designed coping mechanisms and routines, these risks could be reduced to a level that is

acceptable to even risk-averse managers. Conversely, the impact of non-controllable risks on firms' foreign operations and subsidiary survival is mostly determined independently of firms or managers' capabilities, and may pose a greater threat, both psychologically and substantively. Therefore, we suggest an intra-person variation in the perceived importance of different types of risk.

**Hypothesis 2:** Managers exhibit a stronger aversion to non-controllable risk than controllable risk.

#### **4.3.2 Home country learning**

Subnational regions across a country feature cultural and social diversity, leading to considerable differences in consumer behaviour (O'Grady & Lane, 1996). Entering unfamiliar territory carries risks for MNEs due to informational disadvantages relative to local counterparts (Zaheer, 1995). The same argument holds for domestic venturing. Setting up new operations in geographically distant markets within the home border offers managers direct learning opportunities regarding what cues are extracted from an unfamiliar environment and how to interpret these (Cuervo-Cazurra, Maloney, & Manrakhan, 2007). Investing in other subnational regions introduces more productive capacity to the local production base or takes up market share enjoyed by incumbents (Chen, 2008). Head-on competition creates a learning environment where the managers are required to accommodate various local interest groups (Jiménez, Luis-Rico, & Benito-Osorio, 2014). Such experience shapes managers' domestic mindsets about resource exploitation and helps firms to overcome psychic distance to unfamiliar foreign territories (Nadkarni, Herrmann, & Perez, 2011; Nadkarni & Perez, 2007). Successful inter-regional operation within the home country can foster managers' positive attitude toward foreign expansion (Wiedersheim-Paul, Olson, & Welch, 1978). The literature on EMNEs argues that the ownership advantages firms exploit overseas are a path-dependent outcome of engagement in the home context (Tan & Meyer, 2010), which gestates the organisational knowledge, structures and routines necessary for coordinating dispersed operations across

geographical regions (Eriksson, Johanson, Majkgard, & Sharma, 1997). Research reveals that EMNEs' domestic diversification has a positive effect on their international diversification (Lu, Liu, Filatotchev, & Wright, 2014).

Despite the “home country learning” argument being intuitively appealing, domestic experience alone may not necessarily lead to high-risk strategic decision making. Firstly, the impact of outcome history on risk propensity observed by behavioural decision theorists is confined strictly to the same task setting (Osborn & Jackson, 1988; Sitkin & Weingart, 1995; Taylor, Hall, Cosier, & Goodwin, 1996; Thaler & Johnson, 1990). Organisational learning theorists argue that it is less likely to observe positive learning when the task frequency is low and its heterogeneity high (Zollo, 2009), such as strategic decisions where managers are overwhelmed by outcome and causal ambiguity (Zollo & Winter, 2002). The gap in task features between domestic and international venturing could be wide enough to prevent managers from generalising the efficacy of their capability gained from the former to the latter context (Gavetti, Levinthal, & Rivkin, 2005; Nadolska & Barkema, 2007).

Secondly, the stock of home country experience *per se* is not enough to induce risk-taking (Haleblian, Kim, & Rajagopalan, 2006). Behavioural decision theory posits that it is positive outcome history that increases managers' risk propensity (Sitkin & Pablo, 1992; Sitkin & Weingart, 1995). For strategic decisions, the history of decision quality may not necessarily derive from objective performance indicators (Chatterjee & Hambrick, 2011). The effect of experiential learning is based on managers' own interpretation of previous outcomes when they make strategic decisions that produce fuzzy performance feedback (Zollo, 2009) and involve different dimensions on which performance can be evaluated (Richard, Devinney, Yip, & Johnson, 2009). Such interpretations contain the constructed “reality” about the cause-effect relations and managers' coping abilities based on subjective cues (Kiesler & Sproull, 1982).



These concerns do not preclude the transferability of home country experience, but require a more nuanced understanding. Due to limited cognitive and attentive capacity, top managers often employ a simplifying strategy to develop mental representation of the problem to be handled (Castellaneta & Zollo, 2014; Gavetti, Levinthal, & Rivkin, 2005). Specifically, they tend to single out and direct attention to the critical aspects of the environment while ignoring the others (Duhaime & Schwenk, 1985; Lampel, Shamsie, & Shapira, 2009). The relationship between subjective evaluation of home country experience and managerial risk propensity in foreign location choice may be contingent upon the nature of the aspects of international risk being discussed.

The experience of dealing with controllable risk like contractual hazard is one of capability cues. Managers' cognitive resources and sophistication are conditioned by the institutional context in which the firm operates (Cuervo-Cazurra, 2011). When the domestic environment does not provide the institutional infrastructure to curb corruption, managers have to learn how to grow business in the absence of market-supporting institutions or even commit to corruptive activities in exchange for critical resources and preferential treatments (Cuervo-Cazurra, 2006). Successful domestic experience provides feedback on EMNE managers' ability to control institutional risks, and positive self-evaluation boosts their confidence in coping with institution-related constraints through remedial actions should the adverse scenarios come about. The increased risk propensity of managers may be inferred from the fact that EMNEs seek out high-risk host environment compatible with the home country cognitive imprint (Holburn & Zelner, 2010). Therefore, perceived past success in the home country may convince managers that their risk-coping strategies and execution heuristics will work in other markets with similar institutional characteristics, and to take further risk in subsequent decisions.

**Hypothesis 3a:** Perceived success in domestic sub-national operation increases EMNE managers' risk propensity regarding controllable risk in FDI location decisions.

The experience of dealing with non-controllable risk like political turbulence may amplify its perceived negative impact. If the home environment suffers with political instability, managers may gradually nurture an awareness of understanding the conditions that predispose the political actors to intervene in operations of specific firms (Makhija, 1993). The awareness does not change managers' ability to influence its occurrence or significance, but may become extra alert to the potential consequence of entering a high-political-risk country. In addition, prospect theory predicts that individuals tend to be loss-averse when they have accumulated gains, and therefore unwilling to take further risks (Tversky & Kahneman, 1991). A common reference point in decision making is the status quo. Managers who perceive themselves to be achieving good performance in the home country may be preoccupied with defending current gains (Osborn & Jackson, 1988; Thaler & Johnson, 1990), and thus shy away from unfamiliar and risky foreign markets, especially those with political and civil unrest that could incur asset and personnel losses beyond managers' own control. Therefore, managers who are satisfied with their performance at home will be more averse to non-controllable risk than those without positive home country experience.

**Hypothesis 3b:** Perceived success in domestic sub-national operation reduces EMNE managers' risk propensity regarding non-controllable risk in FDI location decisions.

#### **4.3.3 Potential slack**

Organisational slack is defined as a "cushion of actual or potential resources which allows an organisation to adapt successfully to internal pressures for adjustment or to external pressures for change in policy as well as to initiate changes in strategy with respect to the external environment" (Bourgeois, 1981: 30). We focus on potential slack such as borrowing capacity that has received less attention in the literature but bears a close relation to strategic investment including FDI.

The behavioural theory of the firm suggests that slack influences risk-taking in two ways (Singh, 1986; Wiseman & Bromiley, 1996). First, slack acts as a buffering mechanism to absorb environmental shocks, and allows firms to persist with risky strategies without the need for structural change (Cyert & March, 1963). Second, slack justifies risky strategies that are otherwise unacceptable, and thus increases the range of options open to managerial choice (Cheng & Kesner, 1997). Sufficient slack resources direct managers' attention away from attaining the performance target toward the upside potential of greater variability in search of extra returns (March & Shapira, 1992). IB research follows this view and argues that slack serves to buffer firms from political risk and contribute to the resource base for experimenting with new strategies, thereby enhancing firms' ability to exploit foreign market opportunities (Tseng, Tansuhaj, Hallagan, & McCullough, 2007). Calof and Beamish (1995) suggest that sufficient slack resources prompt managers to skip intermediate stages of internationalisation. Tseng, Tansuhaj, Hallagan, and McCullough (2007) find that an adequate level of slack is positively associated with foreign sales growth.

Despite the fact that the psychological role of slack in risky decisions and internationalisation decisions is well argued, empirical research – with particular regard to potential slack – has provided inconclusive findings (Rhee & Cheng, 2002). Singh (1986) finds that excess uncommitted resources have no effect on firms' orientation toward risk-taking, while Lin, Cheng, and Liu (2009) reports that potential slack is positively associated with a firm's international expansion. When an investment registers poor performance, firms with abundant potential resources can afford delaying the decision to divest and bet on the future recovery (Shimizu, 2007). This effect is particularly evident when loss is relatively large (Shimizu, 2007). As managers are most likely to prefer less risky alternatives in the face of large possible losses (Laughhunn, Payne, & Crum, 1980), potential slack plays a crucial role in decision-making when the investment involves significant risk over which managers have little control (March & Shapira, 1987). One of such risk emanates from host country's political environment. Political risk may cause appropriation of assets or disrupt firms' operations due to

societal unrest (Miller, 1992). It is unlikely for foreign firms to exert any meaningful influence over the high-level political game or power handover that breeds various political hazards (Maitland & Sammartino, 2015a). Potential slack alleviates managers' concern over the consequence of non-controllable risk since additional borrowing capacity insures that foreign market turbulence will not jeopardize the firm's overall financial position and its core business (Lin, Cheng, & Liu, 2009). Financial resource is of particular importance to private firms that have less of other buffering mechanisms in place, such as governmental backing, compared to state-owned enterprises (Voss et al., 2010).

The slack-as-resource literature focuses much theoretical discussion on slack's buffering role against external environmental shocks. It is reasonable to assume that slack is particularly helpful in the face of non-controllable risks. Rarely is it argued or tested as to whether potential slack prompts managers to take controllable risk as well. Nevertheless, there is no *a priori* reason to suggest that slack cannot shield firms from controllable risks given that it is often of less severity than non-controllable risk. Thus we hypothesize that potential slack increases managers' tendency to take both controllable and non-controllable risks when making FDI location choices.

**Hypothesis 4a:** Potential slack increases EMNE managers' risk propensity regarding controllable risk in FDI location decisions.

**Hypothesis 4b:** Potential slack increases EMNE managers' risk propensity regarding non-controllable risk in FDI location decisions.

## **4.4 Methodology**

### ***4.4.1 Research setting and sample***

We test our hypotheses on Chinese private firms. In emerging countries like China, the domestic market is fragmented by provincial protectionism and institutional disparities across subnational regions (Boisot & Meyer, 2008). Firms face varying explanation and execution across provinces for the same nationwide policy issued by the central government (Shi, Sun, & Peng, 2012). Domestic venturing in other provinces provides important learning opportunities for Chinese firms to tackle policy risk and legal risk associated with the region-specific enforcement of formal rules (Chan, Makino, & Isobe, 2010; Sun, Peng, Lee, & Tan, 2014). While previous studies have found an interactive relationship between home country risk and host country risk (Delios & Henisz, 2003b; Holburn & Zelner, 2010), single home country context makes managers' sub-national experience comparable.

We choose private firms because they are more likely to be influenced than state-owned enterprises (SOEs) by the experience, competence and prejudice of top management when it comes to internationalisation decisions (Ji & Dimitratos, 2013). Compared to SOEs that dominate the aggregate Chinese OFDI data (Buckley, Clegg, Cross, Liu, Voss, & Zheng, 2007), Chinese private firms share with MNEs from other countries similar characteristics of market orientation and advantage exploitation, which enhances the external validity of the study and allows for generalisation of the findings to other emerging countries (Ramasamy, Yeung, & Laforet, 2012).

Our sample consists of 60 top executives of Chinese private manufacturing firms that either have foreign subsidiaries, or have expressed a strong intention to engage in cross-border investment. Considering the lengthy and highly structured task we ask managers to complete, we employ purposeful sampling that enables us to a) recruit top managers as respondents, and b) establish a balanced sample with a good coverage of international versus non-international

experience as well as developed versus developing country operations. As different industry sectors are characterised by varying levels of tangible versus intangible resource commitment with implications for risk exposure, we intentionally restrict the sample to manufacturers. Sampled managers are approached in aid of contacts from two leading Chinese business schools and from a municipal governmental department, and to a lesser extent, through personal contacts. All firms are headquartered in Beijing, Shanghai or Zhejiang province (see Table 4).

**Table 4 Sample descriptive characteristics**

	<b>Percent of Sample</b>	<b>Average number of countries in which subsidiaries operate</b>	<b>Average number of years of foreign operation</b>	<b>Have FDI experience</b>
<i>Firm size (employees)</i>				
Small (<300)	60.00%			
Medium (300-2000)	28.33%			
Large (>2000)	11.67%			
Chairman or CEO	26.67%			
VP or Investment Manager	73.33%			
<i>Province of origin</i>				
Beijing	16.67%	0.90	2.30	30%
Shanghai	56.66%	1.32	3.32	77%
Zhejiang	26.67%	1.19	4.71	75%
Full sample	100.00%	1.22	3.52	68%

#### **4.4.2 Discrete choice method**

To study managers' views on risk, we employ the discrete choice method (DCM) that has been widely used in marketing, transport, health economics and recently IB research (Anderson, Coltman, Devinney, & Keating, 2011; Buckley, Devinney, & Louviere, 2007), to model managers' preference based on stated preference data. Compared to other preference elicitation approaches such as policy capturing and conjoint analysis, DCM is theoretically

grounded on random utility theory (RUT) and rests on the assumption of utility maximisation (Louviere, Hensher, & Swait, 2000). This assumption holds in our theorisation that, despite being boundedly rational, managers make intendedly rational choice to maximise the chance of achieving a predetermined objective, irrespective of its substantive nature (Buckley & Casson, 2009; Chung & Alcacer, 2002; Gavetti, Levinthal, & Rivkin, 2005). The utility manager  $n$  obtains from choosing alternative  $j$  is given by:

$$U_{ni} = \beta x_{ni} + \varepsilon_{ni}$$

where  $x_{ni}$  is a vector of observed attributes for alternative  $i$ , and  $\beta$  is a vector of weighting coefficients that reflect managers' preferences.  $\beta x_{ni}$  represents the systematic component of utility whilst  $\varepsilon_{nj}$  describes an unknown, random component that is mostly reflective of preference heterogeneity (Manski, 1977). RUT is based on the notion of compensatory behaviour in that gains in one attribute can compensate for losses in another. Managers are assumed to consciously or intuitively compare the alternatives and make a choice that delivers the highest utility based on the trade-offs among the attribute levels. The quasi-experiment offers three important advantages. First, the marginal utility parameters extracted from managers' own behaviour effectively indicate their *ex-ante* views on location attributes including risk, which substitute for imposing the researchers' criteria *ex post*. Second, a variety of specific aspects of international risk can be added into the analysis as observable attributes of the hypothetical location options. The analysis of managers' marginal preference for each risk can reveal the relative perceived importance of one another. Third, we are able to examine managers' current tendencies to take specific risks without reference to any particular context – i.e. host country – thereby eliminating the contamination of idiosyncratic risk perceptions.

We explicitly draw upon Buckley, Devinney, and Louviere (2007) to develop the attributes and levels. Their design is derived from an extensive review of the location choice

literature. We further reduce the variable list to the attributes having the most significant and consistent effect as per their experimental results. Definition and dimensionality of the attributes are determined based on a review of academic literature and professional reports including Worldwide Governance Indicators by World Bank and World Investment and Political Risk by Multilateral Investment Guarantee Agency (MIGA). We pre-tested the face validity of the attributes and the realism of the task through in-depth interviews with academics and ten Chinese state-owned or private MNE managers. Modifications are made particularly to the attribute definitions, and new attributes are added to suit the research question. Table 5 presents the definitions of the final ten location attributes and the associated levels.

We employ *D*-optimal fractional factorial design to maximise statistical efficiency while reducing the number of choice sets that each manager completes (Kuhfeld, 2006). Each respondent is presented with the same 32 pairs of hypothetical investment locations where the levels of 10 location attributes are varied according to the underlying optimal design. By manipulating the levels, we force managers to make trade-offs between risk and return as well as between one aspect of risk and another. We also specify that the investment being made would require 30% of the firm's total cash available for investment for the next three years. Respondents have the option to choose location 1, location 2 or a no-go decision across 32 choice sets. Table 6 provides a sample of choice task.

We use political instability – a function of high-level political game (Maitland & Sammartino, 2015a) – to represent non-controllable risk, and legal protection – which mostly bears on partners' opportunism and contractual disputes – to represent controllable risk. Similar distinction has been made in the real option literature (Cuypers & Martin, 2009; Xu, Zhou, & Phan, 2010). The parameters of risk variables reflect the marginal utility to managers, and can be used to test Hypothesis 1 through between-class comparison and Hypothesis 2 through within-class comparison. With regard to Hypotheses 3 and 4, we further collect demographic and firm information to examine the influence of covariates on managers' preference structure.



Home country experience refers to managers' experience of orchestrating operations in sub-national areas other than the home province. Following Zollo (2009), we employ a perceptual measure (0=no sub-national experience, 1=extremely dissatisfied, 9=extremely satisfied) for respondents' interpretation of the experience quality regarding home country venturing. As our DCM task specified the percent of cash reserve to be invested, we effectively controlled for available slack, i.e. excess liquidity, and thus direct attention to potential slack (Bourgeois & Singh, 1983). For potential slack to influence strategic decision-making, it "must be visible to the manager and employable in the future" (Sharfman, Wolf, Chase, & Tansik, 1988: 602). We measure potential slack on a five-point scale by asking respondents' perceived easiness of acquiring bank loan in the home country (Tan & Peng, 2003). This measure captures the theoretical essence of the commonly used equity-to-debt ratio. Given the contention that the stock of international experience may affect managers' risk-taking (Carpenter, Pollock, & Leary, 2003), we include it in the model as measured by the number of years since a firm's first foreign investment.

**Table 5 Investment attributes and levels**

<b>Investment attributes</b>	<b>Levels</b>
<i>The cost of operations</i> – Choosing a specific location can lead to higher or lower costs of operation across the value chain	Decrease 20%, Decrease 10%, Increase 10%, Increase 20%
<i>Return on investment (ROI)</i> – Describes the rate of return expected from the investment	Significantly less than home market, Same as home market, Significantly greater than home market
<i>Access to new resources, assets and technologies</i> – Choosing a specific location can lead to greater competences being developed in the firm, through access to physical resources, organisational assets, or new technologies	No new access, Access
<i>Potential market size</i>	Large relative to home market, Same as home market, Small relative to home market
<i>Growth</i> – The rate of sales increase in the market	Decline, No growth, Low growth, Strong growth

<b>Political Instability</b> – Denotes the likelihood of political and civil unrest, and the extent of policy disruption due to either political transition or lack of institutional constraints on the policy making authority.	Unstable, Stable
<b>Local stakeholders</b> – Indicates the influence of local interest groups, such as community, producers, labour union, NGOs and the like.	Powerful, Non-existent
<b>Line of business</b> – Denotes whether the new investment is in an existing, related or new line of business	Same line of business, Related line of business, Completely new line of business
<b>Local competition</b> – Indicates the level of competition within the local industry the firm is to enter.	Weak, Intense
<b>Legal protection</b> – Denotes whether legal structures are effective for the protection of both physical and intellectual assets, the settlement of investment disputes, and the control of corruption.	No protection, Strong/adequate protection

**Table 6 Example of an investment choice task**

Instructions: Your organisation is considering directly investing in operations in this foreign location and the investment being made represents 30% of the total cash available for investment for the next three years. Please note each pair of options is independent of one another and compare only between two options in one pair.		
	<b>Option A</b>	<b>Option B</b>
Cost of operations	Decrease 10%	Increase 20%
Return on investment	Same as home market	Significantly less than home market
Access to new resources, assets and technologies	Access	No new access
Potential market size	Large relative to home market	Same as home market
Growth	Strong growth	Low growth
Political Instability	Stable	Unstable
Local stakeholders	Powerful	Powerful
Local competition	Weak	Intense
Line of business	Related line of business	Completely new line of business
Legal protection	Strong/adequate protection	No protection

If the investment option described above were available to your organisation, which would you undertake instead of or in addition to other currently available investments (Tick ONE box only)?	<input type="checkbox"/> A	<input type="checkbox"/> B
	<input type="checkbox"/> Neither	

#### 4.4.3 Estimation

In line with previous studies (Anderson, Coltman, Devinney, & Keating, 2011; Chung & Alcacer, 2002), we first use conditional logit model (CL) as a starting point to examine managers' location decisions (McFadden, 1974). The result of CL shows the marginal contribution of each attribute level to managers' utilities, which as a whole reflects the underlying preference structure. It provides a clear indication of the validity of the experiment and the seriousness with which the respondents take the task. However, CL has been criticised for its strong assumption about individuals having the same preference structure. Given the hypothesised managerial heterogeneity, systematic preference variability could be conflated with response error. We therefore employ latent class logit model (LCL) – a semiparametric extension of CL that specifies heterogeneity by approximating parameter variation with a finite number of distributions across individuals. Table 7 presents the empirical justification for relaxing restrictions on parameter variation based on information criteria. LCL achieves a lower value for Akaike information criterion (AIC), Bayesian information criterion (BIC) and consistent Akaike information criterion (CAIC) than CL, indicating that LCL fits the data better than CL. Individual behaviour now depends on both observable attributes in the experiment and latent heterogeneity that varies with unobserved characteristics (Greene & Hensher, 2003). Specifically, LCL assigns different coefficient values to discrete classes that together constitute the population, and simultaneously solves for, via Expectation-Maximisation (EM) algorithm, both the choice probabilities conditional on class membership and the posterior probability of each individual being assigned to each class. We use the EM estimates as the starting values for

standard, gradient-based maximisation to obtain class specific standard errors and class membership parameters (Bhat, 1997).

To test further for latent heterogeneity, we use a mixed logit model (MXL) in which all of the parameters are allowed to vary across individuals along independent normal distributions (Chung & Alcacer, 2002). Table 7 indicates that MXL achieves a lower value of AIC and BIC but a higher value of CAIC than CL. We perform a log likelihood ratio test (LRT) to address the mixed messages as the two models are nested. LRT confirms that MXL is preferred over CL ( $\chi^2(17) = 72.07, p < 0.0001$ ) due to improved model fit. Alongside the comparison between CL and LCL, the results support our premise of managerial heterogeneity since models allowing for varied preference structures, irrespective of the distribution of heterogeneity, fit the data better than one with fixed parameters. Moreover, information criteria prefer two-class and three-class LCL models to MXL, supporting our adoption of finite mixture specification.

#### 4.4.4 Results

**Aggregate model.** Table 8 provides the results of the CL analysis. Coefficients are indicative of marginal utilities of the corresponding attribute levels where positive sign suggests positive preference and negative sign suggests an avoidance attitude. For risk attributes, the results are all highly significant and aligned with the risk-averse assumption, except that managers do not consider powerful local stakeholder a hindrance to investment. As a rationalist might expect, managers are deterred by political instability (non-controllable risk), intense competition and lack of legal protection (controllable risk). In addition, they prefer familiar environment evidenced by the positive and statistically significant parameter for staying with the same line of business.

**Table 7 Model fit and information criteria for the competing models**

CL	MXL	Latent Class
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			<b>2-class</b>	<b>3-class</b>	<b>4-class</b>	<b>5-class</b>
Log likelihood	-1738.9	-1698.7	-1677.2	-1649.9	-1623.1	-1607.4
AIC	3511.8	3465.4	3424.4	3405.8	3388.2	3392.8
BIC	3547.4	3536.6	<b>3497.6</b>	3516.7	3537.0	3579.3
CAIC	3564.4	3570.6	<b>3532.7</b>	3569.8	3607.9	3668.2
N. param.	17.0	34.0	35.0	53.0	71.0	89.0

*Note:* Bold item indicates best model fit.

The results associated with the return attributes show that managers take production cost into consideration as expected. Yet we do not witness a monotonic effect as the lowest cost-of-production is not appreciated. Unlike Buckley, Devinney, and Louviere (2007), we find a clear-cut, monotonic effect of return on investment (ROI) on investment decisions. Managers penalise lower-than-home ROI and are attracted to higher-than-home ROI, conforming to economics based thinking. Access to new resources and technologies matters yet only to a marginal extent. The effect of growth is less than perfectly clear-cut. Nevertheless it is without doubt that managers react positively to locations featuring high growth. The results bear out the validity of DCM as managers behave by and large the way theory suggests as regards the return variables.

Given the results of CL, the conclusion that managers are uniformly taking a risk-averse stance when making FDI location decisions seems justified. However, we have contended that the randomness of the model is not just in the error term but is also attributable to the variability in individual preference distribution. Table 8 also provides the results of MXL, which are not qualitatively different from those of CL. This suggests, in accordance with Table 7, that continuous mixture specification of the preference heterogeneity may not be supported by the data. The following latent class analysis offers a more refined view.

**Table 8 Conditional logit and mixed logit models**

	<b>CL<sup>a</sup></b>	<b>MXL<sup>b</sup></b>
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<i>The cost of operations</i>		
Cost decline by 20%	0.152	0.147
Cost decline by 10%	0.450***	0.498***
Cost increase by 10%	-0.167*	-0.173*
Cost increase by 20%	-0.436***	-0.472***
<i>Return on investment</i>		
Significantly lower than home market	-0.449***	-0.483***
Same as home market	-0.082	0.080
Significantly higher than home market	0.531***	0.563***
Access to new resources	0.078	0.085*
<i>Potential market size</i>		
Smaller than home country	-0.009	-0.017
Same as home country	-0.123*	-0.141*
Larger than home country	0.131**	0.158**
<i>Growth</i>		
Declining	-0.124	-0.120
No growth	-0.109	-0.112
Low growth	-0.131*	-0.148*
High growth	0.365***	0.380***
Local stakeholder non-existent	0.005	0.004
Weak local competition	0.242***	0.262***
<i>Line of business</i>		
Existing	0.171**	0.191**
Related	-0.140*	-0.157*
Completely new	-0.031	-0.034
Non-controllable risk	-0.790***	-0.860***
Controllable risk	-0.547***	-0.587***

Sig. codes: <0.001 '\*\*\*', <0.01 '\*\*', <0.05 '\*'

<sup>a</sup> Standard errors are clustered at the individual level.

<sup>b</sup> Random coefficients are assumed to be independently normally distributed.

***Latent class logit models.*** Following conventional procedure (e.g., Greene & Hensher, 2003; Train, 2008), we determine the appropriate number of classes in the LCL based on information criteria. CAIC and BIC penalise more heavily the increasing number of parameters than AIC to control for overfitting and thus should be the preferred indicator. Table 7 suggest that the two-class model registers the best model fit according to both BIC and CAIC. In

addition, we calculate the average of the highest posterior probability of class membership across all individuals to measure how well the two-class model performs in differentiating the underlying preference structures. The average is around 0.98, confirming the appropriateness of two-class model.

The resulting class scores for each attribute level, Wald test of between-class coefficient equality, and covariate analysis are presented in Table 9. While the managers from both classes uniformly seek markets with high ROI and growth rate and penalise low investment return, we notice a few important differences that tease them apart. For instance, Class 1 managers take strong avoidance to a 20% decrease in production cost. Surprising as it may seem, it is not unseen among previous choice modelling analyses as for some managers a big drop in cost signals potential problems in an area uncaptured by the attribute levels of the experiment and apparently considered undesirable (Anderson, Coltman, Devinney, & Keating, 2011). Conversely, Class 2 – the majority group – exhibit a positive and statistically significant relationship between the lowest cost and investment decision, and indeed show a monotonic effect of cost. This clearly indicates that heterogeneity is disguised in the insignificant coefficient in aggregate CL analysis. Another example is that Class 2 managers seek new resources from foreign markets whereas Class 1 do not. CL only reports a marginally significant ( $p < 0.051$ ) influence of resource and knowledge acquisition and fails to discover the difference in the investment motivations underlying managers' decisions (Chung & Alcacer, 2002). Other between-class differences include a significant yet divergent attitude toward negative market growth and small market size.

An examination of risk attributes reveals what matter to managers belonging to different classes and to what extent they matter. Class 1 managers tend to avoid all risks featured in the experiment – they avoid unstable political environment (non-controllable risk), powerful local stakeholders, intense industrial competition, and poorly developed legal institutions (controllable risk). These managers also prefer to stay in the same line of business when

venturing abroad. In stark contrast, Class 2 are not deterred by the presence of stakeholders like labour unions, and feel indifferent to industrial diversification in a foreign market.

As Wald statistics suggest that Class 1 and Class 2 managers differ in the extent of aversion to political and legal risk, we further compare their effects size between two classes. Given the identification problem with logit models, the absolute values of the estimated parameter cannot be compared straightaway (Greene & Hensher, 2003). We therefore calculate the willingness-to-pay ratio for the two risk factors by recoding ROI as a continuous variable and dividing each parameter of the risk factors by the parameter of ROI of the same class (Louviere, Hensher, & Swait, 2000). The ratio is indicative of how much investment return the managers are willing to sacrifice in order to avoid the specific risk. Table 10 reveals that Class 1 managers are less concerned with legal risk but more avoidant to political risk, compared to Class 2. In addition, the parameters for competition risk do not differ significantly between the two classes. Thus, Hypothesis 1 is supported. It is also clear that for both classes, political risk – a non-controllable type of international risk – has a stronger negative effect than the more controllable legal risk. Thus, Hypothesis 2 is supported.

**Table 9 Latent class model with covariates**

	<b>Class 1</b>	<b>Class 2</b>	<b>Wald</b>
<i>The cost of operations</i>			
Cost decline by 20%	-0.993***	0.616***	33.02***
Cost decline by 10%	0.961***	0.238**	15.43***
Cost increase by 10%	0.068	-0.271**	3.36
Cost increase by 20%	-0.036	-0.583***	6.39*
<i>Return on investment</i>			
Significantly lower than home market	-0.862***	-0.377***	8.70**
Same as home market	0.123	-0.123	3.32
Significantly higher than home market	0.739***	0.500***	2.58
Access to new resources	0.070	0.148**	4.45*
<i>Potential market size</i>			
Smaller than home country	0.220*	-0.136	6.59*



Same as home country	-0.480***	-0.050	9.16**
Larger than home country	0.260*	0.186**	0.26
<i>Growth</i>			
Declining	0.393**	-0.324***	15.33***
No growth	-0.277*	-0.015	2.54
Low growth	-0.606***	-0.008	9.17**
High growth	0.490***	0.347***	0.57
Local stakeholder non-existent	0.216*	-0.056	7.23**
Intense local competition	-0.327***	-0.244***	0.65
<i>Line of business</i>			
Existing	0.555***	0.064	10.98***
Related	-0.710***	0.021	18.86***
Completely new	0.155	-0.085	3.25
Non-controllable risk	-1.485***	-0.548***	40.77***
Controllable risk	-0.800***	-0.513***	5.10*
<i>Covariates</i>			
Domestic experience	0.627*	Fixed	
Potential slack	-2.223**	Fixed	
Foreign experience	-0.262	Fixed	
Class size	0.415	0.585	

Sig. codes: <0.001 '\*\*\*', <0.01 '\*\*', <0.05 '\*'

Note: Class 2 is taken as reference group in covariate analysis.

**Table 10 Willingness-to-pay (WTP) ratio for risk variables**

	Class 1 WTP	Class 2 WTP
Non-controllable risk	-1.861	-1.220
Controllable risk	-1.000	-1.155

On top of class allocation, LCL offers an appealing feature that can relate class membership to a set of covariates (Bandein-Roche, Miglioretti, Zeger, & Rathouz, 1997). Influences of covariates on individuals are completely reflected in their posterior class membership. We find that managers who believe they perform better in the domestic market are more likely to belong in Class 1. One might argue that in general Class 1 managers are more risk-averse than Class 2 managers, who do not respond negatively to the presence of powerful stakeholder and changing line of business. Nevertheless, a closer look at the institutional risks suggests that managers with successful home country experience are relatively less deterred by

controllable risk yet have a stronger aversion to non-controllable risk, compared to those without successful domestic cross-regional operations. Therefore Hypothesis 3a and 3b are supported. Conversely, firms' potential slack is positively associated with managers' membership in Class 2, which are less averse to non-controllable risk and more averse to controllable risk than Class 1, thereby confirming Hypothesis 4b but rejecting 4a. Firm's international experience is only marginally significantly associated with class membership ( $p < 0.057$ ). It is not surprising as research suggests that the lack of prior international experience may no longer be a significant constraint for risk-taking in Chinese MNEs' FDI location choices (Lu, Liu, Wright, & Filatotchev, 2014).

#### **4.5 Discussion and Implications**

This study revisits IB theorising on the relationship between experience and risky FDI location decisions, and provides an individual level explanation from risk propensity perspective to complement the firm-level research. Empirical tests also confirm managerial risk propensity being influenced by firm-level contextual variables, as opposed to representing constant personality traits. Unlike previous studies focusing on policy risk or regulated industries with unique characteristics (Delios & Henisz, 2003b; Garcia-Canal & Guillén, 2008; Holburn & Zelner, 2010; Makhija, 1993), we have constructed and tested arguments that can inform the general location choice literature.

Our experimental analysis presents two key findings. First, we show that managers hold different views on international risks. When it appears that one group of managers are more risk averse than another – as current theories assume, a closer look suggests more nuanced patterns. Managers not only display heterogeneous risk propensity to a given aspect of international risk, but also tend to be more averse to non-controllable risks and less averse to more controllable risks, providing a more informed view than the overall risk-seeking/risk-averse bifurcation. Second, the conceptualisation of risk propensity allows us to examine the reasons underlying

the heterogeneity other than simplistically attributing it to personality trait. Our finding reveals that managers' risk propensity varies with the perceived success of home country experience. Firms' potential slack also influences managerial risk propensity regarding the non-controllable political risk. To summarise, managers are indeed different in risk attitude as expected, but what matters is the context and the nature of risk under analysis.

Our empirical results have important implications for theorising about FDI decision in general and location choice in particular. Firstly, previous theorisation about MNEs' risky FDI largely relies on firm-level explanations (Delios & Henisz, 2003a; Delios & Henisz, 2003b; Henisz & Delios, 2001; Jiménez, Luis-Rico, & Benito-Osorio, 2014) and barely considers the role of managers who make strategic choices in response to the configuration of firm capabilities, environmental characteristics and personal preferences (Child, 1972; Schotter & Beamish, 2013). Our findings suggest that risk propensity rather than dispositional risk preference determines managers' risk-taking behaviour, and latent heterogeneity in risk-taking can be explained by subjective performance feedback and objective firm characteristics. Thus, managers' interpretation of prior experience rather than the experience or resources *per se* influences the decisions they subsequently make, raising the question to what extent the deterministic models can explain FDI decisions without recourse to individual cognitive processes (Bourgeois, 1984; Hitt & Tyler, 1991). Accounting for the mediating role of managerial preference and cognition may reconcile the mixed findings of firm-level risk research, especially regarding whether EMNEs are constrained by international risk (Duanmu, 2012; Kang & Jiang, 2012; Quer, Claver, & Rienda, 2012; Ramasamy, Yeung, & Laforet, 2012).

Secondly, despite the fact that "institution" consists of a number of dimensions including rule of law, quality of judicial system and quality of public goods (Peng, Wang, & Jiang, 2008), the current IB literature tends to arbitrarily generalise the effect observed on one dimension to the "institution" as a whole. However, we find that the effect of institution-related risk may vary depending on the specific dimension being considered. Knowledge and cognitive

resources about how to operate in corrupt countries can only induce managers to invest in corrupt foreign countries but not necessarily in politically unstable countries (Cuervo-Cazurra, 2006; Cuervo-Cazurra & Genc, 2008), although both fall in the category of “weak institutions”. We cannot take for granted that EMNEs are more likely to expand to and survive in other developing countries owing to previous exposure to weak institutions (Cuervo-Cazurra & Genc, 2011). Whether EMNEs have a strong propensity to invest or enjoy an advantage in other countries depends on the institutional characteristics analysed (Cuervo-Cazurra & Genc, 2008). Some countries boast a well-developed democratic political system as a legacy of colonialism but suffer from an ineffective legal system against organised crime or corruption (Henisz, 2000). The final decision is determined by the weights managers place on each aspect of international risk, which are associated with their relevant experiences (Delios & Henisz, 2003b; Perkins, 2014) and performance history (Sitkin & Weingart, 1995). This poses question about the boundary of assuming managers as monolithically risk-averse or risk-seeking, as is seen in behavioural decision research.

Thirdly, our focus on the role of experience enriches the current understanding of the theoretical link between experience and location decisions (Coeurderoy & Murray, 2008; Cuervo-Cazurra & Genc, 2008; Driffield, Jones, & Crotty, 2013; Ramos & Ashby, 2013). Extant literature on EMNEs has devoted much discussion to the proposed home-country based advantages (Cuervo-Cazurra, 2011). Our finding suggests that the learning effect derived from sub-national venturing is contingent on the aspects of institutional risk being considered, and could indeed prevent them from leveraging the unique, institution-based advantages (Cuervo-Cazurra & Genc, 2008). Thus the simplistic classification of advanced as opposed to weak institutions based on gross aggregations has masked the unique effects of different sub-dimensions of institutions. In contrast to the home country learning argument, we find that managers with successful domestic experience are particularly averse to political risk, conforming to the loss-aversion thesis. This evidence points to the boundary of prospect theory given that loss aversion is only observed when managers face non-controllable, external threat.

Further, the insignificant effect of international experience *vis-à-vis* the significant effect of domestic experience may suggest that Chinese managers still rely on domestic mindsets when expanding abroad (Nadkarni & Perez, 2007). This is also implied in the FDI research convention that the country of origin is predominantly used to measure distance to the host country (Barkema, Bell, & Pennings, 1996; Kogut & Singh, 1988).

Lastly, our results regarding the relationship between firm's potential slack and risk propensity not only confirm that managers' tendency to take risk can be influenced by contextual variables, but also contribute to the slack literature. Behavioural theory has long posited the effect of slack on risk-taking, yet the direction of this effect is still unsettled, not least in the context of internationalisation (Rhee & Cheng, 2002). Previous research pays relatively little attention to potential slack because the popular financial measure is usually highly correlated with another common control variable, i.e. firm size (Rhee and Cheng, 2002). Very little evidence is found on the relationship between potential slack and *ex-ante* risk-taking as opposed to *ex-post* income stream uncertainty (Singh, 1986). Our results suggest that potential slack generally reduces managers' avoidance to risk related locational attributes, lending support to the slack-as-resource argument where slack is viewed as facilitating strategic behaviour (Singh, 1986). This contrasts with Wiseman and Bromiley's (1996) finding of "hunger-driven" view where low potential slack triggers problemistic search and risk-taking. One explanation lies in the difference between income stream uncertainty as examined by Wiseman and Bromiley (1996) and our focus on *ex-ante* managerial risk-taking. The untested applicability of previous conclusions based on income stream uncertainty in the context of strategic decision making offers opportunity for future research (Bromiley, 1991). Further, we only find support for the link between potential slack and non-controllable risk. While it is reasonable to infer from the literature that slack is helpful in dealing with non-controllable risk, its usefulness in the face of controllable risk is often assumed rather than tested. Our findings of the varying influence of slack on controllable *vs.* non-controllable risks merit further theoretical development regarding the mechanism of slack.

In addition, our unique methods provide some distinct advantages. First, previous firm-level research capitalises on secondary data and reveals only average trends in location choices by lumping all firms into an undifferentiated group. Extant primary research, on the other hand, may find the data contaminated with managers' retrospective biases and instead reveal "espoused theories of action" (Hitt & Tyler, 1991). While there are exceptions comparing the varying ways in which MNEs value location attributes as a function of ownership type (Ramasamy, Yeung, & Laforet, 2012) or knowledge-seeking motivation (Chung & Alcacer, 2002), little attention has been paid from within the IB community to managerial preference heterogeneity (Buckley, Devinney, & Louviere, 2007). Our experimental investigation using finite mixture specification provides a finer-grained account of managers' tendency to take risk than the simplistic bifurcation between risk-seeking and risk-averse actors.

Second, behavioural strategists tend to push the argument to the point that managers are cognitively biased when evaluating external risk *vis-à-vis* their capability of controlling risk (Busenitz & Barney, 1997; Kiss, Williams, & Houghton, 2013; Simon, Houghton, & Aquino, 2000), whilst economists do not subscribe to the assumption that managers are irrational by character and attribute the empirical anomalies to bounded rationality (March, 1978). Our methods allow us to circumvent the philosophical debate and control for informational constraints. Specific risks are presented in a stylised manner in the experiment so that the preferences revealed do not conflate with managers' subjective evaluation of the riskiness of any specific location options, but rather reflect the general views on the relative importance of each risk involved in foreign investment.

Third, the adoption of the experimental method allows for an examination of the relative importance of one aspect of international risk against another. It remedies the imperfect ability of secondary data research arising from the multicollinearity problem (Feinberg & Gupta, 2009; Globerman & Shapiro, 2003; Slangen & Beugelsdijk, 2010). Without experimental

manipulation, it is hardly possible to tease apart the effect of political and legal risks since secondary data would show a high correlation. Applying experimentation to the context of international risk reveals fine-grained risk propensity associated with each specific aspect, contributing to the behavioural decision theory that focuses on a lumpy individual-level risk propensity. Our results also suggest that political risk and legal system are consistently regarded by managers as the most critical dimensions of environment in shaping organisation performance abroad. One implication is that the lack of predictability of country risk indicators may be due to a mismatch between the risk factors captured in these measures and those considered by managers (Kiss, Williams, & Houghton, 2013; Oetzel, Bettis, & Zenner, 2001). This caveat generalises to a whole range of institutional studies as the predictability of governance quality indicators may depend on the specificity of the dimensions being assessed.

In the following chapter, we generalise our framework from Chapter 3 and the findings of Chapter 4 to the wider context. Specifically, we seek to examine, based on a secondary sample of Chinese MNEs, whether the cognition based explanation holds when extended to international experience in general and to firm level of analysis. We argue that a theoretical understanding of the risk concepts can help to explain the boundary of the organisational learning mechanism. Our findings regarding the varying effect of experience on mitigating different types of risks and regarding the residual heterogeneity in MNEs' responses to risks lend support to our framework. In addition, we drawing upon signalling theory to examine whether firms' responses to external investment assurance substitutes for internal learning. The empirical analysis underpins our contention that the framework we proposed in Chapter 3 provides a much needed complement to the dominant capabilities paradigm.

## **5 THE ROLE OF EXPERIENCE IN FDI LOCATION CHOICE: CONTROLLABLE RISK, NON-CONTROLLABLE RISK, AND HIGH- LEVEL GOVERNMENT VISITS**

### **5.1 Introduction**

International business research has shown an enduring interest in how experience influences firms' foreign direct investment behaviour (Martin & Salomon, 2003). However, this theoretical relationship has not been adequately specified (Padmanabhan & Cho, 1999). One prominent example lies in the international risk literature. Evidence suggests that firms' experience with high-risk countries can moderate the negative effect of risk on subsequent entries into other countries (Del Sol & Kogan, 2007; Delios & Henisz, 2003b; Holburn & Zelner, 2010). Yet this literature is almost exclusively focused on "political constraint" as a source of risk, and whether its theoretical ground can be generalised is less known.

This gap in the literature has important implications. If the moderating effect is rightly rooted in the organisational learning theory as previous studies contend, we might need to caution the generalisability of the conclusion outside its theoretical boundary and establish the conditions under which firm experience can confer ownership advantages driving foreign expansion. Recent research has attempted to close this gap by comparing the effect of different types of risks. Garcia-Canal and Guillén (2008) find that firms from regulated industries respond to macroeconomic risk and policy instability in opposite ways. Oetzel and Oh (2014) view political risk as continuous, and natural disaster, technological disaster and terrorist attack as discontinuous risk. They show that experience is not a source of ownership advantage for firms to overcome discontinuous risk when entering foreign markets. This is in contrast to the received wisdom based on the analysis of political risk. Maitland and Sammartino (2015a) propose that political risk may come in different forms under two power settings – "status quo" and "change in status quo", which may have varying theoretical implications.



Embracing the tension between the economic and behavioural point of view as to how risk should be conceptualised we draw a distinction between controllable and non-controllable risk. It is best manifest in March and Shapira (1987) who contrast gambling which involves predetermined odds with managerial risk-taking where managers believe they can exert a certain degree of control over the outcomes. Accordingly, we define non-controllable risk as determined fully by the external environment, and controllable risk can be influenced by firms and managers. To compare with previous findings, we discuss both aspects within the category of political risk. Under the “status quo” setting, political institutions literature suggests that political risk is an controllable variable as MNEs have “the ability to block adverse and/or promote favourable policy change” within the given political structure (Henisz, 2003: 181). But there are other types of political risk such as societal turmoil, ethnic conflict and civil warfare, which result from the high-level political game between various branches of the government (Dai, Eden, & Beamish, 2013; Henisz, 2003). Unlike the “status-quo” setting, MNEs have little ability to forestall the occurrence of violence under turbulent circumstances and have to take the risk as given. Empirical evidence indicates that political instability is not closely tied to policy change and should be treated separately (Brewer, 1983). Despite the important distinction between controllable and non-controllable political risk, previous studies tend to conflate them and generalise the conclusion from one aspect to the other.

To be sure, one can draw a spectrum where one end is pure controllable risk and the other pure non-controllable risk. Any risk is a mix of both with varying weights. Nevertheless, drawing this conceptual distinction may help us understand the contradictory effect of experience as observed by previous studies. In addition, we extend the argument to the process of learning, and shed light on the residual, unobserved heterogeneity in firms’ responses to controllable versus non-controllable risk by reference to the organisational learning theory. Finally, despite the equivocal findings of experiential learning, the experience-as-learning argument is much researched. We further examine an alternative, unattended role of experience

in FDI location choice, which attenuates the signal strength of a governmental investment assurance initiative, that is, commerce ministerial visits from the home country to the host country. Our hypotheses are tested on a sample of Chinese listed manufacturing firms over 2008-2012.

We make three contributions to the literature. First, we reconcile the contradictory findings as to whether experience can mitigate the negative impact of risk on entry. We show that the received conclusion derived from the studies of political institutions cannot be generalised to all types of risks, not even to other types of political risk. There is a boundary for experiential learning beyond which experienced firms no longer enjoy advantages over their less experienced counterparts. Political risk is not a lumpy phenomenon as scholars have assumed. Literature sees a whole host of terms being used and different typologies established to describe country risk. Yet little attention has been paid to the nature of risk *per se*. We show that a revisit to the concept of risk itself and a theory-based approach to understanding risk-taking may yield important insights into FDI decisions.

Second, we extend the learning literature by discussing unobserved heterogeneity in MNEs' location strategies. Previous studies attribute the link between experience and FDI decisions to learning and capability. However, experience alone is not a sufficient condition for learning. A missing link in this relationship is cognition. We find a significant variation in the responses to controllable risk among MNEs originated from the same home country. This is not evident with regard to non-controllable risk. We ascribe the inter-firm variation to the unobservable role of subjective performance feedback and the way in which managers interpret the efficacy of prior strategies in a new context. Unobserved heterogeneity is unaddressed by previous studies using firm level data and singular models, and calls for further research on behavioural strategy.

Third, we examine an unconventional role of experience in decision making, in addition to the familiar experience-as-learning argument. International experience is viewed as moderating the effect of home country investment assurance signal on MNEs' location choice. Signal fit and signalling effectiveness decline for experienced firms, whose information search and opportunity assessment behaviour tends to be driven by routines (Nelson & Winter, 1982). We also extend the application of the signalling theory in management research. Previous discussion of information asymmetry primarily revolves around the communication of organisational characteristics, and much of the research focuses exclusively on financial structure and managerial incentive as signals and on stakeholders and financial investors as signal receivers (Connelly, Certo, Ireland, & Reutzel, 2011). We contribute to this literature by viewing home country government as signaller who intend to alleviate information asymmetry regarding host country business environment and convey its institutional support for home country investors by organising high-level government visits to the potential host country. Our findings suggest that not a ministerial visit *per se* but the right type of visit has an encouraging effect. The interaction between signal and firm experience also has practical implications for host countries wishing to attract established foreign firms through investment promotion initiatives.

Next we explain the conceptual differences between controllable and non-controllable risk as rooted in two distinct theoretical traditions, and revisit the argument about the effect of experience on high-risk entry, which varies depending on the nature of the risk. Our theorisation moves on to the process of learning where inter-firm variations arise, and concerns how experienced vis-à-vis less experienced firms scan and interpret the signal conveyed by business-oriented high-level government visits. Then we present the empirics where particular attention is paid to observed and unobserved heterogeneity among MNEs. Discussion and implications follow.

## 5.2 Theory and Hypotheses

### 5.2.1 *Non-controllable risk and controllable risk*

Research across economics, finance, marketing and strategy, that discusses risk in theory either traces back to Knight's (1921) definition or takes it for granted as the received conceptual base for risk. Knight conceives of risk as measurable probabilities of alternative outcome states, and uses statistical probability to gauge risk when possible outcome states can be classified into classes and empirical data be obtained to indicate the frequency of those classes. Because the underlying, true probability distribution of the outcomes is presumably stationary, more confidence can be placed on the statistical probability as empirical data accumulates over time. This conceptualisation has a lasting influence particularly on neoclassical economics (Miller, 2009), upon which the mainstream IB theory is established (Buckley & Casson, 2009).

Risk can be dealt with through hedging and insurance and is thus considered an insignificant issue (Meltzer, 1982). Whenever risk cannot be fully hedged in insurance markets, as in cross-border investments (Henisz, 2003), firms are assumed to take it as given and adjust resource allocation to align with the environmental prospects (Brouthers, 1995; Miller & Friesen, 1980). For sure, firms' responses to risk may vary depending on their subjective understanding of risk. But to Knight and his followers, the subjectivity is lodged in the differential judgmental ability to classify events in order to depict distributions rather than in the interplay between decision makers and the environment (Miller, 2007). In other words, risk is treated as a non-controllable element of the external environment. Political risk in this case refers to the instability of political conditions, including change of regime, civil war and societal unrest, which may incur monetary and other losses to MNEs (Aharoni, 1966; Miller, 1993). This understanding of risk is particularly evident in the country level studies of FDI where political risk is assumed to be entirely exogenous to MNEs, which respond only passively to the environmental characteristics of the host country (Buckley, Clegg, Cross, Liu, Voss, & Zheng,

2007; Fatehi & Safizadeh, 1994; Globerman & Shapiro, 2003; Loree & Guisinger, 1995; Sethi, Guisinger, Phelan, & Berg, 2003).

On the other hand, behavioural decision theory challenges this mechanist view on risk. Behaviourist scholars suggest that unlike gamblers faced with predetermined odds, managers believe that the riskiness of a choice in managerial situations can be controlled and reduced to an acceptable level thanks to their skills, talents and capabilities (March & Shapira, 1987; McCrimmon & Wehrung, 1986). Managers are found to infuse this belief into the decision making process regarding high-risk, strategic investments (Chatterjee & Hambrick, 2011). This conceptualisation of risk is echoed by other behavioural perspectives such as organisational learning theory, and is also well received in the IB literature.

IB scholars suggest that country risk, and even political risk alone, has multiple distinct aspects and these concepts need to accommodate a whole host of risk factors (Brown, Cavusgil, & Lord, 2015; Fitzpatrick, 1983; Lessard & Lucea, 2009; Miller, 1992; Simon, 1982). Both political institutions literature and non-market strategy research focus on a particular aspect of political risk which is a function of the political constraints upon the authorities' discretionary behaviour, and over which firms enjoy a certain degree of control (Bonardi, Hillman, & Keim, 2005; Henisz, 2000). Henisz and Zelner (2010: 91) state clearly that "insurance offers limited protection against policy risk because a firm's exposure is largely determined by its own ability to manage the policy-making process". Such political capabilities allow firms to interact with the host country authorities in pursuit of preferential treatment, and to preempt or block adverse policy changes (Boddewyn & Brewer, 1994; Hillman & Hitt, 1999), creating a potential ownership advantage of MNEs (Henisz, 2003). Empirical evidence suggests that proactive management of the relationship with the host country government is a common strategy for MNEs to enter industries with strong government involvement and countries with unpredictable policy environment (Bonardi, 2004; Garcia-Canal & Guillén, 2008; Holburn & Zelner, 2010; Lawton, Rajwani, & Doh, 2013). Differential lobbying skills to engage local actors as surrogate

may lead the identical location to pose varying level of risk to two otherwise similar MNEs. Rather than passively assessing the environment *per se*, MNE managers take into consideration their own ability to enact a favourable firm-environment relationship and develop FDI entry strategies in accordance (Ring et al., 1990).

While Henisz and his coauthors have tried to avoid using “risk” and instead introduce terms as varied as policy uncertainty, political hazard, political constraint and institutional idiosyncrasy, many tend to merge this research with the broad literature examining the effect of risk and uncertainty on FDI decision and expansion (Henisz & Zelner, 2010). Problem arises when the theoretical underpinning of this literature does not generalise to other aspects of political risk. For instance, political knowledge and capability cannot address the inherent instability of a host country’s regime. These risks arise when the power handover is contested via uprising by those who seek to challenge the political status quo (Maitland & Sammartino, 2015a). The resulting society-wide unrest may always bring MNEs the threat of disruptions and losses where lobbying and negotiation skills are to little avail. In management theory, there are notable distinctions between non-controllable environment that cannot be influenced by firms, and controllable environment that in part results from firms’ own behaviour (Weick, 1979). One example is the received bifurcation between endogenous and exogenous uncertainty in the real option literature (Cuypers & Martin, 2009; Folta, 1998). Following this tradition, we define non-controllable risk as determined fully by the external environment, and controllable risk as that can be influenced by firms and managers. While any risk in reality is a mix of both, lumping together the two distinct aspects of political risk may deprive researchers of the opportunity to examine their different theoretical implications and lead to confusing conclusions.

### **5.2.2 Risk, experience and FDI entry**

There is a sizable body of literature on the relationship between host country risk and firms’ foreign entry. Both survey and secondary data research at the firm level reach a general conclusion that MNEs tend to avoid investing in countries with high risk and reduce the level of

resource commitment should they choose to enter (Delios & Beamish, 1999; Delios & Henisz, 2000; Delios & Henisz, 2003a; Delios & Henisz, 2003b; Garcia-Canal & Guillén, 2008; Henisz & Delios, 2004, 2001; Holburn & Zelner, 2010; Oetzel & Oh, 2014; Slangen & Beugelsdijk, 2010). This literature follows from the new institutional economics that explains how firms' behaviour is affected by the administrative context in which they operate (North, 1990). Much of the discussion about risk has been centred on the host government's discretionary policymaking capacities and lack of credible commitment to the rules of the game.

Further, political institutions literature finds additional evidence that firms are not equally affected by host country risk. Some are less deterred, and some even proactively search for marketplace where the authorities' monopoly control over formal rules is unchecked so as to negotiate preferential treatment relative to the competitors (Garcia-Canal & Guillén, 2008). A prominent explanation for this heterogeneity in entry behaviour is firms' different stock of experience in the same or similar environment – at home or abroad (Cuervo-Cazurra, 2011; Cuervo-Cazurra & Genc, 2011; Del Sol & Kogan, 2007; Delios & Henisz, 2000; Delios & Henisz, 2003b; Holburn & Zelner, 2010). Experienced firms can to some extent overcome the threat of host country political risk, as evidenced by their spatial choice and ownership stake.

Previous studies attribute this pattern to organisational learning since experience is an important channel through which capabilities can be built (Zollo & Winter, 2002). Learning theory suggests that economic agents gain informational advantages that can be redeployed in the neighbourhood of their past courses of action (Cuervo-Cazurra, 2011; Cuervo-Cazurra & Genc, 2008). In the context of FDI, experiential learning develops knowledge about the extent to which an institutional configuration would pose threat to foreign investors, and help managers create firm-specific coping mechanisms through which they can exercise control over the policy environment in other countries (Henisz, 2003). Such mechanisms include forming political network for acquiring insider information and engaging in back-stage activities for obtaining desirable regulatory conditions, among others (Hillman & Hitt, 1999). More

importantly, experiential knowledge as to which coping mechanism is best suited to tackle a political situation would be eventually transformed to mental models and “selection heuristics” in particular, which influence the way in which managers evaluate the attractiveness of location alternatives in subsequent foreign investments (Bingham & Eisenhardt, 2011; Maitland & Sammartino, 2015a). Repeated exposure to the same risk may convince managers that they can rely on the coping mechanisms to contain the effect of adversity and condition the odds suggested by the external information (Oetzel & Oh, 2014). While the effectiveness of the coping mechanisms largely depends on the relevance of previous experiences to the current context (Delios & Henisz, 2003b; Maitland & Sammartino, 2015a; Perkins, 2014), it does not necessarily require context-specific experience for a firm to enter a risky country. General international experience nurtures firm-specific internationalization knowledge and routines for sensing and seizing overseas opportunities (Eriksson, Johanson, Majkgard, & Sharma, 1997). In particular, the breadth and heterogeneity of previous experience enriches firms’ cognitive resources for identifying power structure dynamics, and can compensate for the lack of experience in the focal country (Jiménez, Luis-Rico, & Benito-Osorio, 2014; Maitland & Sammartino, 2015a; Powell & Rhee, 2015).

The well-received conclusion that experience can moderate the negative effect of risk on entry is predicated on two assumptions. First, organisational learning can help firms enact an operating environment that is less risky so that the decision to exploit ownership advantages in a foreign market can be justified. Second, firms take into account this competence in decision making and evaluate political risk against their own competence (Jiménez, Luis-Rico, & Benito-Osorio, 2014). The second assumption is underpinned by behavioural decision research (March & Shapira, 1987). The first assumption fits well with risk being controllable, which by its nature can be influenced by managerial efforts. Yet it does not hold when the environmental risk is less controllable. In such cases, risk can no longer be reduced in any significant sense and firms do not enjoy any substantial advantage of lower risk over others, regardless of their experience.



Prominent examples of non-controllable risk occurring in the wider operating environment include political turmoil, natural disasters and terrorist attacks, which are difficult to anticipate and could have a tremendous impact on firms' performance and survival. Under these threats, firms can do little beyond developing reactive strategies and business continuity plans. Some firms may be better prepared than others in the sense that they can swiftly evacuate personnel, switch to alternative supply chains and acquire recovery assistance from the host country and the representatives of the home country (Webb, Tierney, & Dahlhamer, 2002). Yet such preparedness requires experience specifically related to suffering or managing very similar risks, and even repeated experience of that kind (Oetzel & Oh, 2014). Given the singular and idiosyncratic nature of these risks, this is often not the case for many MNEs, not least EMNEs which have just started international expansion. Even if they had such experience, the risk they face would be not substantially different to that faced by inexperienced firms. Empirical evidence confirms that experience with high-impact terrorist attacks as well as natural and technological disasters has no effect on entry into other countries suffering similar conditions (Oetzel and Oh, 2014). The same argument holds for political turmoil. Precautionary strategies can neither prevent riots-induced nationalisation or destruction of corporate property, nor can it reduce anti-foreigner sentiment among the citizens during power reshuffles. As experience offers little advantage now, an entry is more difficult to justify, *ceteris paribus*.

Consensus has been reached in the literature that both policy and socio-political instability reduce the likelihood of entry by foreign firms in general (Buckley & Casson, 1998; Henisz & Delios, 2001). But how experience affects this relationship depending on the nature of the risks is less well understood. We argue that international experience is useful for firms to tackle controllable risk rather than non-controllable risk and thus hypothesise:

**Hypothesis 1a:** MNEs that have more international experience are less deterred by host country controllable risk than those with less experience.

**Hypothesis 1b:** International experience does not affect firms' responses to host country non-controllable risk.

### 5.2.3 *Unobserved heterogeneity in risk-taking*

Employing behavioural theory enables us to establish a relationship between observed heterogeneity in firms' responses to controllable vs. non-controllable risks. This does not yet explain, however, the residual unobserved heterogeneity.

Organisational learning theory suggests that experiential learning not only gives specific guidance for behaviour but also develops mental models for future decision making. Given the complexity of strategic decisions, managers commonly utilise simplifying mental models to economise on limited cognitive capacity (Gavetti & Levinthal, 2000). In the case of risk assessment, mental models concern what informational cues are indicative of risk, where to find that information, and what constitute the evaluation criteria for interpreting the information (Bingham & Eisenhardt, 2011; Bingham, Eisenhardt, & Furr, 2007). Assessing controllable risk requires an additional mental model. For instance, firms face such an eventuality in the *ex-post* policy environment that the favourable terms negotiated at the time of entry may be altered by the host country government in an obsolescing bargaining scenario. Thus managers need to factor into the entry decision their ability to guard against the overturning, alteration or reinterpretation of policy commitments (Boddewyn & Brewer, 1994; Delios & Henisz, 2003a). When managers evaluate an entry opportunity, a biased overestimation of their own ability is often preferred to the external, unbiased performance distribution in a market (Wu & Knott, 2006). Hence it is conceivable that controllable risk would trigger a particular mental model that concerns the efficacy of the knowledge and ability possessed at the point of entry.

Undoubtedly, developing this mental model involves experiential learning. Yet there are two factors that are often unobservable from firm level data but play an important role in affecting the mental model. First is the performance feedback from previous experience that

provides direct information to shape this mental model (Bateman & Zeithaml, 1989; Chatterjee & Hambrick, 2011; Osborn & Jackson, 1988; Sitkin & Weingart, 1995; Thaler & Johnson, 1990). The outcome history of forestalling the occurrence of unfavourable scenarios presents strong evidence to managers on the extent to which their skills, talents and capabilities can help control the risk in this particular task (March & Shapira, 1987). Under what circumstances the coping mechanisms have succeeded or failed may be translated into managers' stereotypes and provide them with a frame of reference for evaluating new situations (Garud & Rappa, 1994). When the environmental change fits the specific pattern that firms have encountered in the past, this frame of reference contributes to the understanding of the causal relationship and provides guidance for commitment decisions. If the outcomes are inconsistent with expectation, firms acquire new knowledge as to how the boundary of this mental model is conditioned by context-specific characteristics. A critical but often unaccounted factor in this process is that performance feedback is based on managers' subjective evaluation as to whether the coping mechanisms are considered to have succeeded or failed (Zollo, 2009).

Second is the interpretation of previous experience by firms without international experience. Those from the same home country supposedly share a similar mental model on how to enact the regulatory environment for their own favour since the institutional context conditions the way firms have operated and shapes the categories of behaviour that managers accept as legitimate (Kostova & Zaheer, 1999; Peng, Wang, & Jiang, 2008). The most informative source of capability cues is now experience in the home country. It is documented that adjusting the mental models for the structural differences between previous experience and the current context can enhance performance in the new context (Haleblian & Finkelstein, 1999; Williams & Grégoire, 2015). Yet the structural differences between home and foreign environments are masked with substantial uncertainty and difficult for inexperienced firms to discern (Gavetti, Levinthal, & Rivkin, 2005). Firms are unlikely to distinguish the structural similarity from the surface one, and may fill the details of the situation with default assumptions consistent with the existing mental model. On the one hand, the perceived legitimacy of the

current practices tends to remain unchallenged without exposing to institutional pressures (Kostova & Zaheer, 1999). On the other hand, the absence of a concept in the home environment can leave firms unable to comprehend how regulatory, normative and cognitive institutions work in other countries. The lack of relevant experience limits firms' ability to update the mental models and may lead some to "superstitious learning" (Levitt & March, 1988). They may well place varying degree of confidence on the extent to which the coping mechanisms they have successfully employed in the home country can bear fruit in foreign environments (Zollo, 2009).

Therefore, we expect unobserved variation in firms' responses to controllable risk after their international experience is accounted for. For experienced firms, this may be attributed to the role of managers' subjective performance feedback in shaping mental models regarding taking these risks. For inexperienced firms, this may be because of managers' varying perception of the applicability of home country strategies in foreign markets.

**Hypothesis 2a:** There is unobserved variation in MNEs' responses to host country controllable risk.

We have argued that firms that have more experience with foreign operations do not possess an advantage of reduced non-controllable risk over the less experienced firms. Even though firms are unlikely to think they can secure an environment more favourable than others regarding non-controllable risk, it does not rule out the possibility that they may vary in their predictions of risk and therefore still display differential propensities to enter high-risk countries. Case research suggests that some managers and firms employ more complex evaluation heuristics and may achieve more accurate assessment of non-controllable risk than others (Maitland & Sammartino, 2015a). But the economic perspective contends that the quality of prediction does not depend on experiential learning. "Commitment decisions are based on several kinds of knowledge" (Johanson & Vahlne, 1977: 24), and objective knowledge may

confer equally important value as experiential knowledge in the assessment of non-controllable risk. Thus we do not expect that firms have any noticeable reasons to differ systematically in the prediction of non-controllable risk.

Specifically, one does not need insider or private information to evaluate the likelihood of upcoming societal unrest and violence, which is a function of high-level political game (Henisz, 2003). While each country's political game involves a unique mix of actors and interrelationships, there is a persistent structure among institutions that always allows firms to identify the triggers and magnitude of potential political turmoil by understanding the broad institutional fabric and the specific historical evolution (North, 1990). Organisational learning theory suggests that useful information regarding risk assessment includes to what extent the outbreak of non-controllable risks affects incumbent firms of similar characteristics including size, industry and country-of-origin, and whether the affected firms managed to mitigate the magnitude of loss in any replicable ways (Haunschild & Sullivan, 2002). The consequence of political turmoil and instability is public knowledge to all potential entrants and often brought under spotlight by the media (Kasperson, Renn, Slovic, Brown, Emel, Goble, Kasperson, & Ratick, 1988). As opposed to creeping expropriation and other unseen disruptions, non-controllable risk leads to visible impact and salient outcomes that have disproportionate signalling effect to potential entrants (March, Sproull, & Tamuz, 1991). Such signals lead firms to avoid allocating resources to high-risk countries according to the incumbents' outcomes, or otherwise replicate their mitigating practices that have proved effective. The vicarious learning benefit may help reduce the exposure to disaster (Madsen, 2008) and is closely related to the so-called "second-mover advantage" (Teece, 1986).

On the other hand, developing sophisticated predictive models is often outside firms' core area of expertise so that there is only minor gap between skilful and less skilful firms. By gathering more publicly available data on the triggers and conditions underlying the outbreak of past political events, less skilful firms can improve the understanding of the outcome

distribution and close the gap in predictive ability. Alternatively, firms can always resort to commercial risk rating agencies particularly specialised in assessing countries' political instability for foreign investors. These agencies maintain large database for a range of countries and gather predictive opinions from experts who have a superior ability to classify recent events relative to MNEs (Meltzer, 1982). As opposed to the case where the firm-specific nature of controllable risk renders experiential knowledge particularly crucial (Henisz & Zelner, 2010), external information now becomes an equally if not more important input to managers' subjective impressions about the non-controllable risk in the host environment (Kobrin, Basek, Blank, & Palombara, 1980; Pahud de Mortanges & Allers, 1996).

Handing over part of the responsibility of managing non-controllable risk to insurers is also feasible. Unlike the case of controllable risk, insuring against non-controllable risk does not qualitatively differ from using financial instruments to hedge against volatile exchange rates, as opposed to the case of controllable risk (Henisz & Zelner, 2010). Incumbents rarely possess an informational advantage in their ability to mitigate the magnitude of externally determined risks over the insurers so that insurers can use the baseline risk premiums associated with the incumbents to price a policy for new entrants (Henisz, 2003). Therefore, we have no *a priori* reason to suggest that firms vary in the non-controllable risk they face when entering a given host country and in the way they perceive such risks.

**Hypothesis 2b:** There is no unobserved variation in MNEs' responses to host country non-controllable risk.

#### **5.2.4 High-level visit and experience**

In addition to the experience-as-learning argument, experience assumes another important role in decision making as suggested by the signalling theory. Signalling theory follows from information economics that focuses on information asymmetries, which exist

when one party in the transaction holds private information unavailable to the other party who could make better decisions should they have it (Stiglitz, 2002).

Spence's (1973) seminal work formulates the signalling function of education that allows potential employers to distinguish between high-quality and low-quality candidates in the job market. "Quality" in the signalling theory broadly refers to any unobservable characteristic of the signaller that would be considered desirable by an outsider receiving the signal. A signal is formed when the signaller intentionally conveys the positive characteristic to the outsider who thus tends to choose the signaller from its alternatives, given that the outsider benefits from the resolution of informational uncertainty. Nevertheless, for an informative action taken by the signaller to count as an efficacious signal and to be able to resolve information asymmetry, it needs to be both observable to the outsiders and costly to the signallers (Connelly, Certo, Ireland, & Reutzel, 2011).

One efficacious signal in the context of international business is business-oriented high-level government visit, which provides a credible and notable signal as to home country government's intention to encourage and support trade and investment relations with the potential host country. Given that states face resource constraints in diplomacy, some host countries are in a better position than others to receive high-level visits from a given home country as a result of long-term diplomatic engagement (Lebovic & Saunders, 2015). On the home side, choosing one country than another to reinforce diplomatic tie is driven by the desirability of bilateral trade growth (Nitsch, 2007; Pollins, 1989). Whether to extend this tie is also conditioned on cues from the host partner and by the home state's overall strategic interests (Kinne, 2014).

Informational uncertainty around the host country's environment is considered a stumbling block to foreign investment by the internationalisation theory (Johanson & Vahlne, 1977). An array of information sources has been examined in the literature, including firms'

own international experience and peer organisations' entry behaviours and outcomes, which inform the focal firm of its organisational legitimacy and economic feasibility (Belderbos, Olffen, & Zou, 2011; Chan, Makino, & Isobe, 2006). In addition to the firms' own efforts to mitigate informational uncertainty, home country government can proactively signal the diplomatic, political and financial support for its companies to invest in a particular country rather than elsewhere. Formal ministerial visits with a clear business orientation are indicative of the government's recognition and endorsement of a host country's institutional and business environment. Investors who would have known little about the host country are made aware of their organisational legitimacy and economic feasibility being positive in that country when receiving this signal. As this information feeds into the decision function, high-level visits would lead to a higher likelihood of entry.

**Hypothesis 3:** Business-oriented high-level government visit encourages MNEs' entry to that host country.

Signalling theory posits that the same signal may have varying strength depending on the characteristics of the receiver. We discuss two specific behaviours – information search and assessment of opportunity – by experienced and less experienced firms. First, the link between a signal and the underlying quality is defined as signal fit, which determines the amount of attention potential receivers give to a given signal (Connelly, Certo, Ireland, & Reutzel, 2011). Business-oriented high-level government visits convey the message that there are business opportunities to be explored in the host country, and such opportunities fit with the general strategies and capabilities of firms from the focal home country. This signal may be particularly strong for less experienced firms, which are less knowledgeable about where to find relevant information to alleviate environmental uncertainty regarding potential investment destinations. As firms step into foreign territories, their own international experience becomes a more effective way to close the knowledge gap (Petersen, Pedersen, & Lyles, 2008) and relegates other sources of knowledge to a subordinate position (Bruneel, Yli-Renko, & Clarysse, 2010; Li,



Qian, & Yao, 2015). Experienced firms understand that the signal does not necessarily reflect the unobservable quality it is intended to unveil, and organisational routines tend to align information search efforts with the firm's specific strategic trajectory (Betsch, Haberstroh, Glöckner, Haar, & Fiedler, 2001). The more experience a firm has, the more likely it is to maintain the routine of environment scan – aiming at the fit between the environment and firms-specific advantages rather than identifying emerging opportunities that trigger investment waves. Further, experienced firms may have established firm-specific networks connecting with an array of foreign stakeholders. It is conceivable that they would rely more heavily on those networks than publicly available information since the private information the networks provide serves as a source of ownership advantage (Eriksson, Johanson, Majkgard, & Sharma, 1997). Therefore, less experienced firm are more attentive to high-level visit as a signal than more experienced firms.

Second, the way in which receivers interpret the signal influences signalling effectiveness (Branzei, Ursacki-Bryant, Vertinsky, & Zhang, 2004). There are an array of environmental distortions from inside and outside the organisation (Lester, Certo, Dalton, Dalton, & Cannella, 2006). Less experienced firms are more likely to be affected by environmental distortion and particularly the influence of other signal receivers. The way less experienced firms assess an opportunity may be dependent on peer organisations' responses to that signal. In contrast, experienced firms show more consistent mental models regarding investment evaluation, and follow routinised process of opportunity assessment in strategic decision making (Buckley, Devinney, & Louviere, 2007). They are thus less likely to pursue early mover advantages or respond to bandwagon pressures when detecting a promotion signal (McNamara, Haleblan, & Bernadine Johnson, 2008).

**Hypothesis 4:** Compared to more experienced MNEs, those with less international experience are more encouraged by business-oriented high-level government visits to the host country.

## 5.3 Methods

### 5.3.1 *Sample and data*

We test our hypotheses on listed Chinese MNEs' FDI location choices over 2008-2012. We intentionally focus on the immediate aftermath of the Global Financial Crisis as MNEs in general are faced with heightened political and macroeconomic risk in this period, which have evidently affected their entry and expansion strategy in foreign territories (MIGA, 2014). A single home-country design allows us to control for the variation in the domestic mindset, which is shaped by the institutional environment in which the firms operate. We drew the sample of foreign investment from the Chinese Ministry of Commerce (MOFCOM) Directory of Foreign Investment Enterprises, and matched the firm list with those traded on the domestic stock exchanges provided by China Securities Regulatory Commission (CSRC). We cross-checked the foreign investment activities with the CSMAR database – a widely-used source of parent firm data on Chinese listed companies. Complementary data were retrieved from firms' annual reports, which provide further details on those investments made through the foreign subsidiaries rather than by the parent firms. We excluded the investment projects located in three major offshore tax havens for Chinese companies – Cayman Islands, British Virgin Island and Hong Kong (Buckley, Sutherland, Voss, & El-Gohari, 2015) – as well as those in Macau. In order to control for the broad industry effect, we restricted the sample to manufacturing firms according to the two-digit industry classification of listed firms by CSRC. We combined the information from MOFCOM with firm annual reports to obtain the data on firms' international experience. Host country location-specific indicators were collected from various sources (see Table 11). After taking one-year lag and deleting observations with missing host country data, we obtained a sample of 506 location choices made by 212 firms among 59 countries (see Table 12). The inclusiveness of our sample are further checked upon with the Bureau van Dijk (BvD) Osiris database.

### 5.3.2 *Measurement*

**Dependent variable.** Our dependent variable  $Y_{ijt}$  is a binary measure taking a value of one if firm  $i$  invested in country  $j$  in year  $t$ , and zero otherwise. In the cases where a firm makes multiple investments in a given country in a single year, they are counted as one location choice and the dependent variable coded as one regardless of the number of entries (Lu, Liu, Wright, & Filatotchev, 2014).

**Independent variables.** Previous studies of FDI decisions have employed a range of broad country risk indicators as well as focused indicators denoting institution-related risks. As the moderating effect of experience on the relationship between country risk and location choice is most consistent and robust in respect of political or policy risk, we intentionally focus on institution-related risks to test our hypotheses and contrast with previous findings. Among the whole host of institutional risk measures, the World Governance Indicators (WGI) published by the World Bank are employed. WGI depict six dimensions of the institutions by which authority in a country is exercised. Previous research has used the WGI to study MNEs' location choice (Lu, Liu, Wright, & Filatotchev, 2014; Ramasamy, Yeung, & Laforet, 2012), entry mode (Slangen & van Tulder, 2009), amount of activities (Slangen & Beugelsdijk, 2010) and divestment (Oh & Oetzel, 2011). One advantage of the WGI is that they summarise information from 32 existing data sources published by 30 institutes using statistical aggregation method so as to alleviate measurement errors associated with any single indicator (Kaufmann, Kraay, & Mastruzzi, 2010). However, previous studies rely primarily on the WGI's "Political Stability and Absence of Violence" dimension to examine the impact of political risk (Oh & Oetzel, 2011; Ramasamy, Yeung, & Laforet, 2012). Others aggregate all six dimensions to a composite indicator and lose potentially important theoretical implications of different dimensions (Slangen & Beugelsdijk, 2010; Slangen & van Tulder, 2009). Although the dimensions are highly correlated with one another and factor analysis suggests that above 80 per cent of the variances are loaded on one factor, not all of them can be used as appropriate proxy for host

country risk. Risk measures need to be able to reflect the likelihood of unexpected changes that may incur losses, as opposed to “cost”, “challenge” and the current level of institutional development. We delve into the underlying questions that make up these dimensions and identify two appropriate institutional risk proxies. Specifically, “Political Stability and Absence of Violence” reflects agents’ perceptions of the likelihood of political instability and/or politically motivated violence, and particularly the extent to which internal and external conflict and terrorism affect businesses. “Rule of Law” measures the extent to which agents have confidence in and abide by the rules of society, particularly regarding expropriation, observance and enforceability of contracts, property right protection, judicial check on government regulations, judicial independence from political interference, and crime. Both dimensions are consistently rated as the most concerning investment risks by MNE managers (MIGA, 2014). Despite being commonly featured in previous FDI studies, these two are often conflated under the general term “political instability” or “political risk”. We distinguish between non-controllable and controllable risk by comparing the underlying questions used to construct each dimension with our definition set out earlier. “Political Stability and Absence of Violence” captures a range of events which mostly result from the historical engagement among politically active groups in the regime and over which firms can hardly exert any meaningful influence to prevent them from occurring. “Rule of Law”, in contrast, captures those elements of the institutional environment that MNEs can, or may actively, influence in their own favour by negotiating with local partners or engaging political strategies (Henisz & Zelner, 2010). While neither measure lies perfectly on one end of the controllability spectrum, each is clearly leaned toward one end than the other. In our specifications, we define non-controllable risk and controllable risk for host country  $j$  in year  $t$  as

$$NONCONRISK_{jt} = -1 \times \textit{Political Instability and Absence of Violence}_{jt},$$

$$CONRISK_{jk} = -1 \times \textit{Rule of Law}_{jt}.$$

**Table 11 Data sources and descriptive statistics of the location attributes**

<b>Variable</b>	<b>Source</b>	<b>Measurement</b>	<b>N*</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>
CONRISK	World Governance Indicators	Reverse of the “Rule of Law” dimension; high values indicate higher risk.	29,854	-0.36507	1.021521	-1.99964	1.668911
NONCONRISK	World Governance Indicators	Reverse of the “Political Stability and Absence of Violence” dimension; high values indicate higher risk.	29,854	0.03109	1.000188	-1.51389	2.811578
BUS-VISIT	This study	Dummy variable takes the value 1 if minister and/or vice minister of commerce visit the host country alongside China trade and investment promotion delegation, and 0 otherwise	29,854	0.148422	0.355524	0	1
POL-VISIT	This study	Dummy variable takes the value 1 if minister and/or vice minister of commerce visit the host country alongside a member of China Politburo Standing Committee, and 0 otherwise	29,854	0.323809	0.467936	0	1
GDP	World Bank	The natural log of the GDP in current US\$	29,854	5.617177	1.58777	1.313589	9.649749
GDP per capita	World Bank	The natural log of the GDP per head in current US\$	29,854	9.121958	1.52254	5.50124	11.64166
Unemployment	International Labour Organisation	Total employment, % of total labour force	29,854	7.358162	3.944614	0.7	24.7
FDI openness	IMF	The ratio of to FDI net inflows over GDP	29,854	6.05849	31.75019	-57.4297	430.6407
Patent	WIPO	The natural log of the total patent grants by applicants’ origin	29,854	6.085881	3.220031	0	12.62697

Natural resource	World Bank	Total natural resources rents, % of GDP	29,854	7.583544	10.13142	0	64.07019
Tax	World Bank	Total tax rate, % of commercial profits	29,854	44.53056	17.31182	14.1	112.9
Trade	MOFCOM	The natural log of Chinese exports to the host country plus Chinese imports from the host country	29,854	9.421588	1.541664	5.08246	13.00938
Rules of FDI	Global Competitiveness Report	“Business Impact of Rules on FDI” item	29,854	4.809506	0.749501	1.9	6.7
Culture	Ronen and Shenkar (2013)	Ordinal ranking of cultural blocks relative to China	29,854	4.1	1.946824	1	7

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\* $N = 506 \times 59$

**Table 12 Location distribution of investments by Chinese listed firms, 2008-2012**

Argentina	1	Israel	1	South Africa	10
Australia	24	Italy	21	South Korea	5
Austria	2	Japan	21	Spain	7
Bangladesh	2	Kenya	2	Sri Lanka	1
Belgium	3	Luxembourg	6	Sweden	3
Brazil	16	Malaysia	5	Switzerland	7
Bulgaria	5	Mali	1	Tajikistan	3
Canada	18	Mexico	3	Tanzania	1
Czech Republic	2	Morocco	2	Thailand	9
Denmark	3	Netherlands	19	Tunisia	1
Egypt	4	New Zealand	1	Turkey	2
Ethiopia	2	Nigeria	3	Ukraine	1
Finland	2	Pakistan	1	United Arab Emirates	8
France	9	Philippines	2	United Kingdom	8
Germany	47	Poland	5	United States	100
Ghana	6	Romania	4	Uruguay	1
Hungary	1	Russia	15	Venezuela	1
India	22	Saudi Arabia	3	Vietnam	11
Indonesia	16	Singapore	23	Zambia	2
Iran	1	Slovak Republic	1		

We use “BUS-VISIT” to represent visits by the minister, or a vice minister, of MOFCOM accompanied by China Trade and Investment Promotion Delegation, which is organised by MOFCOM and consists typically of top executives from large state-owned enterprises and selected privately owned Chinese firms. To contrast with business-oriented high-level government visits, we also include “POL-VISIT” that indicates the visits by the minister or a vice minister of MOFCOM alongside a China Politburo Standing Committee member but not with the China Trade and Investment Promotion Delegation. Using high-level visits rather than lower-level but more frequent visits follows Nitsch (2007) and Lebovic and Saunders (2015) who argue that the high-level is of greater relevance for strategic decisions and support. Both “BUS-VISIT” and “POL-VISIT” take the value one when they visit the host country in a given year once or more, and zero otherwise respectively. We hand-collected the information for 59 host countries mainly from the MOFCOM website with complementary data from the websites of Chinese embassies, China’s Ministry of Foreign Affairs and China’s

Central People Government. We take two-year lag which registers better overall model fit than one-year lagged data. A low correlation of 0.14 is observed between “BUS-VISIT” and “POL-VISIT”.

**Control variables.** Building upon the extant location choice studies, we control for a number of commonly featured host country attributes that may influence MNEs’ location choices. To account for market seeking investment, we measure market size by the natural log of GDP and market attractiveness by the natural log of GDP per capita (Duanmu, 2014). To account for efficiency seeking investment, we use the percentage of total unemployment (Duanmu, 2014). To account for asset seeking investment, we measure sought-after resources by the natural log of one plus the number of patent granted to residents in the host country (Alcantara & Mitsuhashi, 2012; Chung & Alcacer, 2002). To account for resource seeking investment, we factor in the total resource rents as indicated by the differences between the value of natural resources at world prices and the total costs of production in the host country, as a percentage of GDP (Alcantara & Mitsuhashi, 2012). FDI openness is measured by the ratio of a country’s net FDI inflow to its GDP (Henisz & Delios, 2001). Trade relation reflects bilateral economic ties as denoted by the natural log of Chinese exports to the host country plus Chinese imports from the host country (Quer, Claver, & Rienda, 2012). Although we removed the investments in tax havens from our sample, tax rate is still regarded as one of the main location advantages by foreign investors. We measure it with the corporate marginal tax rate of a host country (Duanmu, 2012). Given that host country institutions are shown to influence MNEs’ entry rate, we take into account the immediate institutional environment regarding FDI using the “Business Impact of Rules on FDI” item in the Global Competitiveness Index. As part of the World Economic Forum’s annual survey, it reflects the extensive opinions of business leaders around the world on the extent to what rules and regulations encourage or discourage foreign direct investment in their countries. Finally, we control for the influence of culture using the cultural block distance (Delios & Henisz, 2003b). Following Barkema, Bell, and Pennings (1996), we establish an ordinal ranking of cultural blocks in terms of their comparative distance



from China (Ronen & Shenkar, 2013). The same block as China is scored one, the most proximate two and so on. Descriptive statistics of the host country attributes and their measurement are shown in Table 11.

We also include firms' international experience as moderator and covariate in our analyses. Previous research suggests that experience breadth has a stronger learning effect on FDI decision making than experience depth (Maitland & Sammartino, 2015a). We thus focus on the breadth of the experience and measure it by the natural log of one plus the number of foreign countries in which the focal firm has established one or more subsidiaries. Alternative measures will be discussed in the robustness test.

#### **5.3.4 Estimation methods**

Consistent with previous studies (Buckley, Devinney, & Louviere, 2007; Chung & Alcacer, 2002), we model the location choices within the random utility framework. The utility of firm  $i$  for location  $j$  in choice occasion  $t$  is:

$$U_{ijt} = \beta_i x_{ijt} + \varepsilon_{ijt}$$

where  $x_{ijt}$  is a vector of observed location specific attributes;  $\beta_i$  is a vector of firm-specific preference parameters or marginal utilities yet unobserved for each  $i$ ; and  $\varepsilon_{ijt}$  is the random component.

Logit model is employed given the dichotomous dependent variable. To include both firm-specific experience and location-specific attributes for testing moderation, we use the unconditional fixed-effects logit with a dummy variable for each location choice instead of the conditional estimator (Holburn & Zelner, 2010). Standard errors are clustered by firm to control for serial correlation. A fixed-effects logit model with both firm and year dummies is also

estimated for robustness check. Unlike in a linear model, the coefficient on the interaction term in limited dependent variable models does not indicate the cross-partial derivative (Ai & Norton, 2003). We calculate the true interaction effect and follow the interpretation format suggested by Wiersema and Bowen (2009).

Our hypotheses also address how the attractiveness of location attributes varies by firm. To accommodate preference heterogeneity, we adopt mixed logit (MIXL) model that allows all parameters to be different across  $i$  (Train, 2009).  $\beta_i$  varies in the population as per the continuous density  $f(\beta_i|\theta)$  where  $\theta$  defines the distribution, and this distribution in theory can take any shape. For the ease of estimation, we assume the random parameters to be independently normally distributed. Normal distribution is by far the most popular specification in previous applications of the MIXL (e.g., Chung & Alcacer, 2002). Arguably, having to choose the mixing distribution *a priori* is an inherent drawback of continuous segmentation models and potentially runs the risk of biased estimation. Nevertheless, normal distribution allows for both positive and negative values and stands as a useful assumption when no prior information is available. The parameter vector  $\beta_i$  can be expressed as:

$$\beta_i = \beta + \eta_i$$

where  $\eta_i \sim N(0, \sigma^2)$ . The influence of firm-specific characteristics is reflected in  $\beta_i$  and particularly in the deviation term  $\eta_i$ . We further accommodate observed preference heterogeneity in the model by introducing firm-specific covariates. Thus  $\beta_i$  can be rewritten as:

$$\beta_i = \beta + \Pi z_i + \eta_i$$

where  $z_i$  is a selection of characteristics of firm  $i$  that influence the mean of the random preference parameters, and  $\eta_i$  is the residual variation. In our application,  $z_i$  refers to firms'

international experience. Given that the choice probability is an integral over the mixing distribution so that it cannot be calculated analytically, we use 3000 Halton draws from the distribution  $f(\beta_i|\theta)$  to approximate each firm's unconditional probability density (Train, 2009), and then maximise the simulated log-likelihood function (Revelt & Train, 1998).

While one might question the appropriateness of imposing *a priori* a mixing distribution on the preference parameters, MIXL has the advantage of revealing unobserved heterogeneity. It provides estimates for both the mean and standard deviation of the preference parameters so as to reveal whether and which location attributes are valued differently across the population (Chung & Alcacer, 2002). An additional advantage is that MIXL allows us to account for and test observed heterogeneity simultaneously, and relax conditional logit's independence of irrelevant alternatives (IIA) assumption.

### 5.3.5 Results

Table 13 reports the coefficient and marginal effect for the unconditional logit model. When the estimated model coefficient on the interaction variable is significant, we calculate the values of the true interaction effect (Wiersema & Bowen, 2009). As expected, both controllable and non-controllable risks have negative effect on location choice. Commerce ministerial visits alongside a business delegation attract Chinese investment while those with a political leader do not influence location choice. The coefficient on the interaction between international experience and controllable risk is significant. So is the true interaction effect at the variable means. Conversely, the interaction between international experience and non-controllable risk has an insignificant coefficient. Following Wiersema and Bowen (2009), we present the value and significance of CONRISK's marginal effect at a low (one standard deviation below mean), mean and high value (one standard deviation above mean) of international experience, holding all other model variables at sample mean. Table 14 shows that the marginal effect of controllable risk on the probability of entry is less negative at higher values of international experience. The same analysis is conducted for the interaction between BUS-VISIT and

international experience given the significant coefficient on the interaction variable. Table 15 shows that as international experience increases, the marginal effect of business-oriented high-level visit on entry becomes smaller. At the high value of international experience, the moderation renders the marginal effect insignificant.

Given our hypothesis on unobserved heterogeneity, we allow all the parameters to be random and examine which of the location attributes are valued differently across the firms. Table 16 provides the estimates of the means and standard deviations of  $\beta_i$  for the baseline specification. We contrast the mixed logit model with its fixed-effects equivalent, i.e. alternative-specific conditional logit. Although only three standard deviations are significant in model 6 and two in model 8, the log-likelihood ratio tests clearly prefer the mixed logit model. In particular, Column 6b and 8b suggest that firms respond to controllable risk differently, but are equally deterred by non-controllable risk, lending further support to the adoption of the random parameter specification.

**Table 13 Determinants of location choice by Chinese listed firms, 2008-2012**

	Model 1		Mode 2		Model 3		Model 4	
	Logit	Marginal Effect <sup>a</sup>	Logit	Marginal Effect <sup>a</sup>	Logit	Marginal Effect <sup>a</sup>	Logit	Marginal Effect <sup>a</sup>
CONRISK	<b>-0.7488***</b> (0.211)	<b>-0.00722***</b>	<b>-0.8175***</b> (0.217)	<b>-0.00787***</b>				
NONCONRISK					<b>-0.4932***</b> (0.119)	<b>-0.00469***</b>	<b>-0.5491***</b> (0.127)	<b>-0.00523***</b>
BUS-VISIT	<b>0.2932*</b> (0.124)	<b>0.00283*</b>	<b>0.4013**</b> (0.147)	<b>0.00386**</b>	<b>0.3246**</b> (0.119)	<b>0.00309*</b>	<b>0.4502**</b> (0.143)	<b>0.00429**</b>
POL-VISIT	<b>-0.0797</b> (0.100)	<b>-0.00077</b>	<b>-0.0747</b> (0.114)	<b>-0.00072</b>	<b>-0.1065</b> (0.099)	<b>-0.00101</b>	<b>-0.1067</b> (0.114)	<b>-0.00102</b>
Int. experience	-0.0393*** (0.006)	-0.00038***	-0.0141 (0.0155)	-0.00014	-0.0304*** (0.006)	-0.00029***	-0.0184 (0.012)	-0.00017
GDP	0.3650*** (0.089)	0.00352***	0.3678*** (0.089)	0.00354***	0.5242*** (0.103)	0.00498***	0.5285*** (0.104)	0.00504***
GDP per capita	-0.3688** (0.125)	-0.00356**	-0.3713** (0.125)	-0.00357**	-0.3098** (0.104)	-0.00295**	-0.3150** (0.104)	-0.00300**
Unemployment	-0.0069 (0.018)	-0.00007	-0.0077 (0.018)	-0.00007	-0.0026 (0.016)	-0.00003	-0.0033 (0.016)	-0.00003
FDI openness	0.0080*** (0.001)	0.00008***	0.0080*** (0.001)	0.00008***	0.0069*** (0.001)	0.00007***	0.0069*** (0.001)	0.00007***
Patent	-0.1849*** (0.051)	-0.00178***	-0.1844*** (0.050)	-0.00178***	-0.1149** (0.039)	-0.00109**	-0.1144** (0.039)	-0.00109**
Natural resource	-0.0080 (0.007)	-0.00008	-0.0082 (0.007)	-0.00008	-0.0101 (0.008)	-0.00010	-0.0101 (0.008)	-0.00010
Tax	-0.0059 (0.005)	-0.00006	-0.0060 (0.005)	-0.00006	-0.0065 (0.005)	-0.00006	-0.0065 (0.005)	-0.00006
Trade relation	0.7280***	0.00702***	0.7289***	0.00702***	0.5198***	0.00494***	0.5200***	0.00495***

Rules of FDI	(0.116) -0.2290	-0.00221	(0.116) -0.2217	-0.00213	(0.110) 0.0658	0.00063	(0.110) 0.0667	0.00064
Culture	(0.139) 0.1005*	0.00097*	(0.139) 0.1019*	0.00098*	(0.101) 0.0272	0.00026	(0.102) 0.0284	0.00027
	(0.051)		(0.051)		(0.046)		(0.047)	
<b>Int. experience × CONRISK</b>			<b>0.0227*</b> <b>(0.011)</b>	<b>0.00038**</b>				
<b>Int. experience × NONCONRISK</b>							<b>0.0167</b> <b>(0.010)</b>	
<b>Int. experience × BUS-VISIT</b>			<b>-0.0405*</b> <b>(0.019)</b>	<b>-0.00044*</b>			<b>-0.0463*</b> <b>(0.021)</b>	<b>-0.00051*</b>
<b>Int. experience × POL-VISIT</b>			<b>0.0004</b> <b>(0.023)</b>				<b>0.0011</b> <b>(0.023)</b>	
Constant	-8.2011*** (1.428)		-8.3179*** (1.443)		-8.9496*** (1.288)		-8.9672*** (1.301)	
Group dummy	Yes		Yes		Yes		Yes	
Observations	29,854		29,854		29,854		29,854	
Log-likelihood	-2250.2		-2245.3		-2250.0		-2246.9	

Robust standard errors clustered by firm below coefficients.

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05

<sup>a</sup> Computed at sample mean.

**Table 14 The marginal effect of CONRISK at varying experience levels**

	Value of experience	Marginal effect of CONRISK <sup>a</sup>	z-statistic
<b>Model 2</b>	Low	-0.00933*	-4.19
	Mean	-0.00721*	-3.87
	High	-0.00543*	-3.29

\* p < 0.05

<sup>a</sup> Computed at sample mean.

**Table 15 The marginal effect of BUS-VISIT at varying experience levels**

	Value of experience	Marginal effect of BUS-VISIT <sup>a</sup>	z-statistic
<b>Model 2</b>	Low	0.00516*	2.56
	Mean	0.00268*	2.18
	High	0.00062	0.58
<b>Model 4</b>	Low	0.00590*	2.92
	Mean	0.00295*	2.52
	High	0.00061	0.55

\* p < 0.05

<sup>a</sup> Computed at sample mean.

**Table 16 Conditional logit (CL) vs. mixed logit models (MIXL)**

	Model 5	Model 6		Model 7	Model 8	
	Conditional logit	Means (6a)	Std. Dev. (6b)	Conditional logit	Means (8a)	Std. Dev. (8b)
<b>CONRISK</b>	<b>-0.7210***</b> <b>(0.205)</b>	<b>-0.6337**</b> <b>(0.206)</b>	<b>0.4973**</b> <b>(0.182)</b>			
<b>NONCONRISK</b>				<b>-0.4741***</b> <b>(0.116)</b>	<b>-0.3459**</b> <b>(0.111)</b>	<b>0.0219</b> <b>(0.283)</b>
<b>BUS-VISIT</b>	<b>0.2537*</b> <b>(0.118)</b>	<b>0.1870</b> <b>(0.129)</b>	<b>0.0002</b> <b>(0.279)</b>	<b>0.2851*</b> <b>(0.113)</b>	<b>0.2121</b> <b>(0.128)</b>	<b>0.0014</b> <b>(0.272)</b>
<b>POL-VISIT</b>	<b>-0.0722</b> <b>(0.095)</b>	<b>-0.0615</b> <b>(0.099)</b>	<b>0.0181</b> <b>(0.323)</b>	<b>-0.0963</b> <b>(0.094)</b>	<b>-0.0785</b> <b>(0.098)</b>	<b>0.0036</b> <b>(0.319)</b>
GDP	0.3394*** (0.086)	0.2407** (0.091)	0.0095 (0.165)	0.4940*** (0.100)	0.3503*** (0.097)	0.0108 (0.169)
GDP per capita	-0.3552** (0.121)	-0.1106 (0.159)	0.5685*** (0.130)	-0.2984** (0.102)	0.0453 (0.131)	0.6930*** (0.110)
Unemployment	-0.0072 (0.017)	-0.0004 (0.023)	0.0381 (0.034)	-0.0032 (0.016)	0.0073 (0.021)	0.0276 (0.039)
FDI openness	0.0077*** (0.001)	0.0060** (0.002)	0.0001 (0.002)	0.0066*** (0.001)	0.0052** (0.002)	0.0000 (0.002)
Patent	-0.1770*** (0.049)	-0.1658*** (0.048)	(0.0503) (0.111)	-0.1099** (0.038)	-0.1295** (0.040)	0.0073 (0.097)
Natural resource	-0.0076 (0.007)	-0.0073 (0.008)	0.0030 (0.019)	-0.0098 (0.008)	-0.0083 (0.008)	0.0021 (0.022)
Tax	-0.0055 (0.005)	-0.0044 (0.005)	0.0002 (0.011)	-0.0061 (0.005)	-0.0055 (0.005)	0.0002 (0.008)
Trade relation	0.7101*** (0.113)	0.9651*** (0.126)	0.3370*** (0.071)	0.5098*** (0.107)	0.8232*** (0.121)	0.3170*** (0.070)
Rules of FDI	-0.2142	-0.0649	0.0198	0.0700	0.0755	0.0075



	(0.135)	(0.137)	(0.267)	(0.099)	(0.112)	(0.244)
Culture	0.1004*	0.1430**	0.0874	0.0308	0.0982*	0.0919
	(0.049)	(0.048)	(0.081)	(0.045)	(0.046)	(0.071)
Observations	29,854	29,854		29,854		29,854
Group	506	506		506		506
LRT MIXL vs. CL	-1758.0	-1721.0***		-1757.8		-1721.0***

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Robust standard errors clustered by firm below coefficients.

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05

In Table 17, we include international experience as firm-specific covariate that may influence the mean of the risk and high-level visit parameters. It is shown that international experience breadth increases the mean of the controllable risk parameter. On average, more experienced firms respond less negatively to controllable risk when making FDI location choices than their less experienced counterparts. Conversely, international experience does not significantly influence the mean of the non-controllable risk parameter. This result, combined with Table 13 and Table 14, confirm Hypothesis 1a and 1b. After the influence of experience on risk-taking is accounted for, there is still residual variation in the controllable risk parameter, as evidenced by its significant standard deviation. Firms respond to controllable risk differently due to unobserved heterogeneity. In contrast, non-controllable risk affects firms' location choices in a negative and uniform way. This supports our theorisation that explicitly distinguishes between controllable risk and non-controllable risk, and confirms Hypothesis 2a and 2b. It should be noted that under the normal distribution assumption, even though some firms may be less deterred by controllable risk than others, the z-scores would suggest that they are unlikely to prefer risky locations to less risky ones. With regard to high-level government visits, BUS-VISIT has a positive effect on the likelihood of market entry for both models. Again, the signalling effect only applies to commerce ministerial visits with a business orientation since the direct effect of POL-VISIT does not register significant estimate. Thus Hypothesis 3 is supported. Firms' international experience breadth negatively moderates the signalling effect by reducing the mean of the BUS-VISIT parameter, such that more experienced firms are less receptive to the signal conveyed by business-oriented high-level visits. This result, alongside Table 15, confirms Hypothesis 4. International experience does not affect the mean parameter of POL-VISIT, as was also denoted by Table 15.

**Table 17 Mixed logit models**

		<b>Model 9</b>		<b>Model 10</b>	
		<b>Means</b>	<b>Std. Dev.</b>	<b>Means</b>	<b>Std. Dev.</b>
		<b>(10a)</b>	<b>(10b)</b>	<b>(10a)</b>	<b>(10b)</b>
<b>H2a</b>	<b>CONRISK</b>	<b>-0.8650***</b> <b>(0.213)</b>	<b>0.4906**</b> <b>(0.174)</b>		
<b>H2b</b>	<b>NONCONRISK</b>			<b>-0.4414***</b> <b>(0.132)</b>	<b>0.0099</b> <b>(0.260)</b>
<b>H3</b>	<b>BUS-VISIT</b>	<b>0.3722*</b> <b>(0.158)</b>	<b>0.0236</b> <b>(0.257)</b>	<b>0.4208**</b> <b>(0.156)</b>	<b>0.0164</b> <b>(0.258)</b>
	<b>POL-VISIT</b>	<b>-0.0687</b> <b>(0.124)</b>	<b>0.0265</b> <b>(0.329)</b>	<b>-0.1006</b> <b>(0.123)</b>	<b>0.0146</b> <b>(0.320)</b>
	GDP	0.2525** (0.092)	0.0057 (0.137)	0.3620*** (0.099)	0.0184 (0.125)
	GDP per capita	-0.1618 (0.141)	0.5428*** (0.110)	-0.0033 (0.131)	0.6625*** (0.108)
	Unemployment	-0.0096 (0.024)	0.0510 (0.028)	0.0008 (0.023)	0.0379 (0.034)
	FDI openness	0.0062** (0.002)	0.0001 (0.002)	0.0053** (0.002)	0.0002 (0.002)
	Patent	-0.1682*** (0.047)	0.0448 (0.091)	-0.1246** (0.041)	0.0223 (0.079)
	Natural resource	-0.0094 (0.010)	0.0125 (0.018)	-0.0085 (0.008)	0.0036 (0.028)
	Tax	-0.0043 (0.005)	0.0004 (0.008)	-0.0055 (0.005)	0.0003 (0.008)
	Trade relation	0.9369*** (0.124)	0.3131*** (0.072)	0.7983*** (0.122)	0.3003*** (0.071)
	Rules of FDI	-0.0700 (0.137)	0.0528 (0.256)	0.0767 (0.113)	0.0003 (0.241)
	Culture	0.1410** (0.047)	0.0931 (0.073)	0.0964* (0.046)	0.0959 (0.067)
<b>H1a</b>	<b>Int. experience × CONRISK</b>	<b>0.3845**</b> <b>(0.121)</b>			
<b>H1b</b>	<b>Int. experience × NONCONRISK</b>			<b>0.1323</b> <b>(0.095)</b>	
<b>H4</b>	<b>Int. experience × BUS-VISIT</b>	<b>-0.3147*</b> <b>(0.160)</b>		<b>-0.3620*</b> <b>(0.160)</b>	
	<b>Int. experience × POL-VISIT</b>	<b>0.0341</b> <b>(0.117)</b>		<b>0.0496</b> <b>(0.116)</b>	
	Observations		29,854		29,854
	Groups		506		506
	Log-likelihood		-1713.0		-1717.3

Robust standard errors clustered by firm below coefficients.

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05

### 5.3.6 *Robustness test*

We test the robustness of our results in four respects. Firstly, in order to align with the comparison between conditional logit and mixed logit, we have chosen to add group dummy in the logit models (Table 13). When choice sets contain many alternatives, i.e. host countries in this case, unconditional estimator may produce biased results (Katz, 2001). Nevertheless, previous studies of location choice find only trivial differences in control variables when comparing the results of conditional and unconditional models (Holburn & Zelner, 2010; Oetzel & Oh, 2014). To eliminate this concern, we also estimate conditional logit and unconditional fixed-effects logit with firm and year dummies on the baseline specification. The results are qualitatively identical.

Secondly, there are cases where a firm made more than one location choice and chose more than one country among the same group of countries in a single firm-investment year. This data structure may potentially violate the utility maximisation assumption underlying the random utility theory. In our main specifications, we treat the cases with multiple positive outcomes as different choices and ensure that the correlation between successive market entries by the same firm is accounted for in estimation. To test the robustness our results, we construct an alternative sample that eliminates the problem of multiple location choices in any firm-year. We do so by randomly selecting an investment observation from each firm-year that has multiple location choices and obtain 336 location choices, in which 191 are invested by firms with international experience and 145 by inexperienced firms among 51 host countries. We estimate our models on this sample and compare the results with those of the main specification. Despite the reduced statistical power, the variables of interest remain significant and thus the conclusions hold.

Thirdly, we test the hypotheses using alternative measures of international experience. From both the MOFCOM Directory of Foreign Investment Enterprises and BvD Osiris, we collected data on a) the number of years since first foreign investment, and b) the number of

foreign subsidiaries firms have for each firm-year. The results show that log-transformed measures provide lower p-value than the raw measures but all results remain qualitatively the same regardless.

Lastly, while we attribute the residual variation in MNEs' responses to controllable risk to the unobserved process of learning, EMNE literature points to an alternative source of heterogeneity in that state ownership reduces firms' concerns over host country risk (Duanmu, 2012, 2014; Ramasamy, Yeung, & Laforet, 2012). To control for this effect, we add in model 9 a dummy variable for state control. The results suggest that state ownership indeed increases the mean parameter of controllable risk as expected but the residual variation remains significant.

#### **5.4 Discussions and Future Research**

There is a sizable body of literature as to whether and how MNEs can benefit from experiential learning in foreign expansion. Experience is regarded as an important source of firm capability. This explains why some firms are less deterred by host country risk than others and thus can exploit the economic growth and cost advantages in emerging countries (Feinberg & Gupta, 2009). Yet the conclusion so far remains unsettled as the boundaries of experiential learning are not fully understood. Moreover, extant research has paid less attention to the role experience plays other than learning in FDI decision-making.

To reconcile the contradictory conclusions of the previous studies (Oetzel & Oh, 2014), we draw a distinction between controllable and non-controllable risk. Controllable risk is specific to the firm or individual while non-controllable risk has uniform impact on the population (Henisz & Zelner, 2010; Wu & Knott, 2006). This distinction has evolved from how economics and behavioural theory conceptualise managerial risk respectively. To test the validity of this approach, we intentionally focus our discussion on the variety of political risk, which has been assumed to be controllable to MNEs in the political institutions literature

(Henisz & Zelner, 2010). We argue that the familiar indicators of policy instability as measured by the separation of power in the government are not posed to capture the non-controllable aspect of political risk – for instance the social unrest and civil violence across Ukraine in relation to the presidential elections in 2004 and 2014.

This distinction proves meaningful as we find that international experience does not confer an advantage in dealing with non-controllable risk. The organisational learning argument is corroborated in the sense that only under circumstances where risk can be reduced by firms' own capability would experiential learning become beneficial. Previous studies have drawn this conclusion from the industry sectors that are either highly regulated by the government or recently open to private ownership (Henisz & Zelner, 2001; Holburn & Zelner, 2010; Jiménez, Luis-Rico, & Benito-Osorio, 2014; Lawton, Rajwani, & Doh, 2013). These industries are particularly exposed to government's discretionary regulations (Henisz, 2000) where political capabilities are of crucial importance (Bonardi, 2004). Our study shows that even manufacturing firms – which seem less likely to possess political capabilities and less subject to government intervention – seek to influence the political environment in their favour. The breadth of previous experience across different foreign countries may enhance firms' routines and capabilities regarding the management of regulatory environment, contractual dispute, and expropriation of intellectual properties. In previous studies, the importance and creation of general internationalisation knowledge and routines is less examined than is context-specific knowledge (Eriksson, Johanson, Majkgard, & Sharma, 1997). Our finding implies that the political institutions literature may have broader theoretical implications than have been explored, and can link up with the vast capabilities paradigm. The fact that some risks universally scare off foreign investors while others invite well-established MNEs also provides policy implications for the government of least developed countries.

Experience alone is sufficient for learning. Organisational learning literature has extensively discussed the process of learning in relation to performance feedback and

knowledge transferability. Firms align entry strategy with the capability they have, which is no doubt a function of experience. Yet two unobserved factors add complex to this relationship. First, performance feedback that enters the decision function is often a matter of subjective evaluation (Levitt & March, 1988; Zollo, 2009). Second, when the new environment is sufficiently complex and uncertain so that managers are unable to discern structural differences between the old and the new (Gavetti, Levinthal, & Rivkin, 2005), firms may vary in the perceived efficacy and legitimacy of the home-based mental models in foreign markets (Nadkarni, Herrmann, & Perez, 2011). These two factors would increase variance around the risk estimates in a singular, deterministic model. Our random parameter model shows varying preferences for controllable risk among Chinese investors after the observed moderating effect of international experience is accounted for. While we have shown that international experience does not moderate the deterring effect of non-controllable risk on FDI entry, there is also no other unknown sources of variation in MNEs' responses to non-controllable risk.

In addition to the experience-as-learning argument commonly featured in the FDI literature, we also examine an alternative role experience plays in decision-making. We find that experienced firms are not as responsive to investment assurance initiatives as their less experienced counterparts. This is because the institutionalisation of learning as a function of experience renders the signal weak and ineffective (McNamara, Haleblan, & Bernadine Johnson, 2008). Experienced firms are less attentive to the signal in information search and tend to employ consistent, proven decision models regardless of bandwagon pressures in sensing and seizing emerging opportunities. Whether to invest in a country depends more on its ability to meet the firm's routinised threshold rather than the apparent locational advantages suggested by the home country government. This suggests that, despite government's effort to convey its intended institutional support to potential investors, it may only appeal to less established firms, which have limited ability to survive in unfamiliar territories. Although investment promotion is a lasting phenomenon of particular interest to practitioners, it is under-researched by IB scholars. We add to the literature by linking the signalling theory to an important type of home country

investment promotion. This extends the application of signalling theory in management research and directs attention from stakeholders' behaviour to firms' strategy. One might want to examine the interaction between signalling theory and the vicarious learning thesis.

Our study raises some important questions for future research. First, if the distinction between controllable and non-controllable risk matters – as we have shown, how does it matter? In the entrepreneurship literature, Wu and Knott (2006) disentangle demand uncertainty and ability uncertainty as involved in market entry decisions. Entrepreneurs are found to display risk aversion to uncertain prospect of market demand and “apparent risk-seeking” to the uncertainty around their own entrepreneurial ability. Thus entrepreneurs may be viewed as having different risk profiles depending on the way in which the researchers look at them. An interesting point discussed in the IB literature is that managers employ different evaluation criteria at different stages of decision making (Benito, Petersen, & Welch, 2009; Buckley, Devinney, & Louviere, 2007). One might argue that managerial attention is paid to non-controllable environment at a different stage from it is to controllable environment. Examining the decision making process from different point in stage may draw different conclusions on managers'/firms' risk-taking tendencies. Nevertheless, in the empirical location research, the common practice of restricting the choice set in the analyses to those already-chosen locations in the sample may have constrained researchers' ability to examine the differences across decision stages. Some risk factors that managers do take into account in the consideration stage may appear irrelevant in the final location choices as they only serve to winnow out the undesirable ones so that the chosen locations are roughly equal in those respects (Mudambi & Navarra, 2003). Therefore we call for more process, individual level research on FDI decision making that would lead to a nuanced understanding of how and to what extent managers' own views come into play in organisation level decisions (Schotter & Beamish, 2013; Williams & Grégoire, 2015).

One promising line of individual level inquiry centres on the different roles controlled attention processing vs. automatic attention processing (Castellaneta & Zollo, 2014) play in



evaluating environmental characteristics. One might reason that managers devote considerable resources into the assessment of market-related risks which essentially require diligent, in-house efforts to understand the specific impacts of demand and competition contingencies on the focal project and meanwhile rely on stereotyping heuristics to screen out certain host countries with substantial political risk as highlighted by recent political turbulence or due to sheer anxiety induced by a lack of knowledge. The way in which managers engage attention processing may have theoretical implications for the behavioural learning perspective.

Lastly, as the globalisation unfolds and the interdependence of world economies is ever increasing, future research needs to think beyond using host country as the unit of analysis for risk studies (Bremmer, 2005). Chinese investment in Africa, for instance, may be as much influenced by the host country's underlying political structure as it is by China's strategic decisions. A new political risk measure may be needed that operates at the dyadic level in order to capture the role of government relations in facilitating or hampering FDI. Rather than combining trend and structure indicators, researchers can construct separate measures to account for their different natures; an absolute level of instability, and a dyadic, relative level of political constraint using Mahalanobis distance specification (Perkins, 2014). The dyadic perspective is also attuned with the recent discussion about the legitimacy theory of political risk (Stevens, Xie, & Peng, 2015).

## 6 GENERAL CONCLUSION

It seems beyond question that international business provides a distinct context for scholars to study the role of risk and uncertainty in strategic decision making. However, despite the numerous insights generated by decades of research on this particular topic, confusions remain as to what we mean by risk and what we mean by uncertainty. This is counterintuitive since construct clarity is usually considered the fundamental building block underlying any stream of research. We believe that synthesising the extant body of literature and using new concepts to explain the old phenomenon may help this topic to regain traction. Among the necessary steps are thorough review of the existing research and novel empirical methods.

Firstly, we tease apart the conceptualisations of risk and uncertainty by reference to the seminal works in economics, management and probability theory. We show clearly that both risk and uncertainty have different meanings. To our knowledge, this is the first attempt to clarify the confusing understanding the literature has long presented. Each category of conceptualisations is well grounded in a specific school of thought. We demonstrate that each conceptualisation has its distinct value and has spawned an array of streams of strategy, entrepreneurship and international business research. A pattern emerges that the disciplines are biased toward on one or two particular conceptualisations of risk and uncertainty. This may be because of the different phenomena the disciplines focus upon. But one might also question if it is possible to knock off the disciplinary traditions in order to ignite new research agendas based on alternative conceptualisations of risk and uncertainty. We also show that there is a tendency among researchers to employ different conceptualisations when examining the same research question. This may be the reason behind the mixed findings regarding some of the most fundamental questions in entrepreneurship and strategy research.

Secondly, we focus on one particular conceptualisation of risk – “risk as propensity” – in the context of foreign direct investment. We bring to light the tension in the literature between organisation-level and individual-level accounts of FDI risk-taking. Organization-level research relies heavily on *post hoc* rationalisation while individual-level research only ascribes the heterogeneity to personal histories and characteristics. We propose a microfoundational framework to account for the nature of the risk in foreign investment. Two points are worth mentioning. First, the risk involved in FDI decision making is subjective as dependent on managers’ mental models and the way in which they construct the choice sets. Second, controllable *vs.* non-controllable risk arises under different conditions, and has different theoretical implications. Drawing upon the behavioural decision theory, we introduce the integrating concept of risk propensity that can well accommodate our proposed understanding of risk. The conceptual distinctiveness of risk propensity is highlighted, and its empirical evidence from different disciplinary literatures presented. The usefulness of this concept lies in providing a lower-level theoretical mechanism underlying the empirical regularity between firm experience and FDI decision making. Our framework also highlights the importance of embedding the cognition based mechanism into the social context of strategic decision making.

Thirdly, we test the usefulness of risk propensity in a quasi-experimental, location choice task. This section is motivated by the observation that existing studies tend to attribute the empirical regularity between experience and FDI to unobservable capability. We draw upon our conceptualisation of risk propensity to build up a managerial level argument for this phenomenon. Discrete choice method proves to be an effective approach to eliminating individual idiosyncrasies in the responses to perceptual measures and to teasing out managerial preference for location attributes. It becomes more powerful when combined with finite mixture latent class modelling. We find that perceived success in regional venturing within the home country border increases managers’ sensitivities to non-controllable risk and decrease their sensitivities to controllable risk. This is strong evidence for the contextual nature of risk propensity, as opposed to the conventional, static assumption of managerial preference in theory

building. Further, we show that managerial risk propensity is also influenced by firm characteristics. The availability of potential slack, for instance, reduces managers' sensitivities to non-controllable risk as expected. Nevertheless, the slack-as-resource argument does not apply to controllable risk, suggesting further investigation into the mechanism of slack. Without quasi-experiment and finite mixture modelling, these important findings would be hardly observable.

Lastly, we focus exclusively on the role of experience in location choice. Combining the arguments from previous chapters, we suggest that experience only moderates the deterring effect of controllable risk as opposed to non-controllable risk. This suggests that the well-established learning mechanism depends on the nature of the risk being discussed. To further explore the difference between controllable and non-controllable risk, we cast spotlight on residual heterogeneity in MNEs' responses to risks after the effect of experience is accounted for. We find significant variation only in the case of controllable risk. This is attributable to the unobserved process of learning, in addition to the stock of experience. The way in which managers evaluate past performance and interpret the efficacy of prior strategies may give rise to this inter-firm variation, which is a neglected phenomenon meriting future research. Moreover, apart from the familiar facilitating role, we propose that experience may play a negative part in decision making. We find that high-level ministerial visits with a particular commercial focus send a signal about home country's institutional support and endorsement of the host country business environment to potential investing firms. International experience moderates signal strength such that more experienced firms are less responsive to this investment assurance initiative than less experienced firms.

Overall, this thesis contributes to the FDI literature by inviting reconsideration of the conventional theory in the light of the findings regarding risk propensity and experience. Practitioners and policy makers may also find this thesis useful. It can be inferred from our research that home country government to some extent can manipulate the spatial distribution of

domestic firms' global expansion through the allocation of financial support. Bank loans need to be granted to light manufacturing firms should Chinese government choose to continue the transfer of domestic productive capacity to African countries that are politically unstable but boast cheap labour. For Chinese government, it is necessary to re-consider its investment promotion strategy should the aim is to avoid encouraging inexperienced firms to venture into unfamiliar territories. Similarly, host countries need to take into account the effectiveness of various investment promotion activities. Establishing close trade and investment ties with China may only attract internationally inexperienced Chinese firms, bringing limited spillover to the local economy.

## **6.1 Limitations**

It is conceivable that one might cast doubt on the prescriptive value of examining location choice only. We admit that it may be more meaningful if the focus is set on investment outcome rather than the decision to invest. A key theoretical issue is thereby left unaddressed – that is, whether managers' choices and responses to risk are truly justified by the outcomes, or are guided by incorrect mental models. Before the analogical reasoning can adapt to performance feedback, managers may initially make unwarrantedly risky decisions based on erroneous assumptions about the usefulness of experience in other contexts (Nadolska & Barkema, 2007; Petersen, Pedersen, & Lyles, 2008; Zeng, Shenkar, Lee, & Song, 2013). This is ever increasingly likely under the legitimacy-based view on political risk, which argues that political risk is not entirely dependent on the bargaining power dynamic between the host government and the foreign investor or on the degree of political constraint on the host government's discretionary behaviour (Stevens, Xie, & Peng, 2015). Whether the host government and host society perceive the MNE as legitimate determines the level of political risk it faces. The socially constructed nature of legitimacy involves a complex interplay between host government, host society and home government. Successful experience in one country may even increase the political risk the firm would face in another country. The fact that MNEs

misconceive their legitimacy and engage in unreasonable investments will be thus of greater theoretical and empirical salience.

Future research may benefit from the parallel development of two lines of inquiry. On the one hand, we need a descriptive account of how and why firms take risk in FDI decisions, as a complement to prediction by the conventional FDI theories. On the other hand, we need to continue the investigation as to when political risk or other country risk may arise, in addition to the traditional bargaining power approach and political institutions approach (Stevens, Xie, & Peng, 2015). These two lines in combination provide a prescriptive account of the performance implications of certain FDI decisions. Only when the decision-making perspective matches with the performance perspective can we truly conclude that the contextual influence does confer on firms a distinct source of competitive advantage. Otherwise, the inferred “capability” may mask the mismatch between competence and confidence. Evidence has been found on superstitious learning and confidence trap in strategic and entrepreneurial decision-making (Miller, 2012; Perlow, Okhuysen, & Nelson, 2002; Zollo, 2009), and not least in foreign investment (O'Grady & Lane, 1996; Petersen, Pedersen, & Lyles, 2008; Zeng, Shenkar, Lee, & Song, 2013). In the light of the emerging forms of risk such as cyber attack and social legitimacy, it is reasonable to conceive that MNEs are more likely than ever to misplace confidence in their ability to control the risks using conventional practices. These insights are yet to be incorporated in this thesis, which is biased toward the descriptive account, despite the fact that it has provided the first attempt to solve such an important question.

Moreover, our empirical studies focus on the link between firm experience and managerial cognition, and on attributing the heterogeneity in firms' risk-taking to the cognitive processes. It is left unattended how individual managers' cognitive processes aggregate to organisational actions and outcomes. Data availability has deprived us of the opportunity to test empirically the aggregation principles, which could have strengthened the firm-level analysis providing inferred support for our framework. As our microfoundational framework suggests, a

comprehensive understanding of FDI risk-taking requires taking into account the social context in which strategic decisions are generated and implemented. Although top managers may well account for a significant portion of variation in firms' behaviour, political dynamics within the corporate elite and corporate governance structures serve as a distinct context from general group decision making. The context may confer considerable potential on IB and strategy research to contribute back to the cognition literature. This is, nevertheless, not fully attainable without rich data on the processes of interaction among the CEO, top managers, the board and major shareholders. We hope future research rises to this challenge.

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## 8 APPENDIX

<i>Author(s)</i>	<i>Level</i>	<i>Key variable(s)</i>	<i>Definition</i>	<i>Measures</i>	<i>Data</i>	<i>Method</i>	<i>Major findings</i>
1) Acedo and Florin (2006)	Individual	Risk perception	Not defined	Managers' evaluation of the level of risk associated with internationalisation, adapted from Sitkin and Weingart (1995)	Small and medium size Spanish firms from seven industries	Survey	CEOs' perceptions of risk mediate the effect of firm age, size and scope of national operations and the effect of individual international posture on the degree of internationalisation.
2) Acedo and Jones (2007)	Individual	Risk perception	Not defined	Managers' evaluation of the level of risk associated with internationalisation, adapted from Sitkin and Weingart (1995)	216 top managers of small and medium sized enterprises (SMEs)	Survey	Managers' risk perception is negatively associated with speed of internationalisation.
3) Agarwal and Ramaswami (1992)	Firm	Investment risk; Contractual risk	Uncertainty over the continuation of environmental factors which are critical to the survival and profitability of a firm's operations in that country;  Difficulties of writing and enforcing contracts that specify every eventuality due to external uncertainty	Managers' perceptions about environmental stability and host government's policies toward profit repatriation and asset expropriation;  Perceptions about costs of making and enforcing contracts, risk of knowledge dissipation and risk of quality deterioration	97 US equipment leasing firms	Survey	Investment risk reduces the likelihood of investment while contractual risk increases the likelihood of choosing investment mode over exporting.
4) Agarwal (1994)	Firm	Country risk	The volatility of a host country's political and market conditions	International Country Risk Guide (ICRG)	148 foreign investment of US manufacturing firms over the period 1985-1989	Secondary	Country risk does not moderate the relationship between socio-cultural distance and choice of joint venture.

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5) Ahmed, Mohamad, Tan, and Johnson (2002)	Firm	Risk perception	The predictive accuracy on a changing event that might lead to negative organisational outcomes	Managers' perceptions of the differences between home and host country, and the level of predictability of a range of environmental dimensions	69 Malaysian public firms	Survey	Low risk perception leads to high ownership entry mode.
6) Alcantara and Mitsuhashi (2012)	Firm	Market opportunity risk; Political risk	Unpredictability of business prospects and institutional conditions that may affect business operations in the host country	Number of home country buyers or rivals; Political Constraints Index (POLCON)	FDI entries of Japanese auto parts manufacturers over the period 1978-2000	Secondary	Intense competition in home country induces MNEs to invest in foreign countries with high market opportunity risk and high political risk.
7) Amariuta, Rutenberg, and Staelin (1979)	Individual	Risk perception	Not defined	Three-item scale capturing perception of expropriation risk, attitude toward communist regime and perception of political risk	120 executives (VP-international) from 120 US firms	Survey	Increased knowledge about East Europe lowers managers' perception of political risk and raises perceived inconvenience of dealing with those countries.
8) Asiedu (2002)	Country	Political risk	Not defined	Average number of assassinations and revolutions	FDI into 71 African countries from 1988 to 1997	Secondary	Political risk is not significant to FDI.
9) Bekaert, Harvey, Lundblad, and Siegel (2014)	Country	Political risk	The risk that the government's actions or imperfections of the host country's institutions adversely affect the value of an investment in that country	Political risk spread based on ICRG	FDI inflows to 30+ countries from 1994 to 2009	Secondary	FDI is negatively related to political risk, and is much more sensitive to political risk than to economic outlook.
10) Brouters (1995)	Firm	Risk perception	Not explicitly defined but with reference to Miller's (1992) framework	Managers' perceptions about control risk including cultural difference and managerial experience, and market complexity risk including political risk and competitive rivalry, all adapted from Miller (1992)	125 US MNEs from computer software industry	Survey	Greater control risk and market complexity lead to greater likelihood of independent entry mode like licensing.

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11) Brouthers, Brouthers, and Werner (2000)	Firm	Perceived environmental uncertainty	Not defined	Perceived Environmental Uncertainty 2 (PEU2) by Werner et al. (1996), a perceptual measure on the unpredictability of 28 environmental factors	95 of 500 largest firms based in European Union nations	Survey	Satisfaction with performance is increased when firms take into account environmental uncertainty in entry mode choice.
12) Brouthers and Brouthers (2001)	Firm	Investment risk	Not defined	Investment risk measure by Agarwal and Ramaswami (1992)	231 Dutch, German, British and US firms doing business in 5 Central and Eastern European countries	Survey	The relationship between cultural distance and entry mode is contingent on the level of investment risk in the host country.
13) Brouthers (2002)	Firm	Investment risk	Note defined	Perceptual question: (1) the risk of converting and repatriating profits, (2) nationalisation risks, (3) cultural similarity, and (4) the stability of the political, social and economic conditions in the target market	178 entries of large European firms in 27 countries	Survey	Investment risk influences mode choice, which in turn affects financial and non-financial performance.
14) Brouthers, Brouthers, and Werner (2002)	Firm	International risk perception	Not defined	Perceived Environmental Uncertainty 2 (PEU2)	95 of 500 largest firms based in European Union nations	Survey	Service and manufacturing firms respond similarly to some dimensions of international risk but differ with the others regarding entry mode choices.

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15) Brouthers and Brouthers (2003)	Firm	Environmental uncertainty; Behavioural uncertainty; Risk propensity	Environmental threat to the stability of business operation;  Inability of the parent firm to monitor and control the performance of foreign subsidiary;  Managers' tendency to take risk that varies with national culture	Investment risk by Agarwal and Ramaswami (1992);  Contractual risk by Agarwal and Ramaswami (1992);  Hofstede's (1980) uncertainty avoidance	227 European firms that have operations in Central and East European countries	Survey	High environmental uncertainty induces service firms to choose wholly owned entry mode while high behavioural uncertainty induces them to choose joint venture. For manufacturing firms, the effects are opposite. Manufacturing firms from home countries with low risk propensity cultures prefer joint venture modes.
16) Brouthers, Brouthers, and Werner (2008)	Firm	Country risk	Not defined, but is regarded as one component of the formal institutional environment with particular regard to governmental or political actions	Euromoney Country Risk	232 Dutch, Greek, German, and U.S. firms that have operations in the Central and Eastern Europe	Survey	Country risk distance moderates the relationship between firm-specific resources and entry mode choice as well as dynamic learning capabilities and entry mode choice.
17) Buckley, Clegg, Cross, Liu, Voss, and Zheng (2007)	Country	Political risk	Not defined	ICRG	Approved Chinese FDI to 49 countries from 1984 to 2001	Secondary	Chinese outward FDI prefer less developed and risky host countries between 1982 and 1991.
18) Coeurderoy and Murray (2008)	Firm	Political risk	Not defined	"Political risk" from Institutional Investor	First five foreign market entries of each of the 241 new-technology-based firms in the UK and 134 in Germany	Survey	Political risk is highly significant for both entry choice and the ranking of entry preferences. Large firms are more cautious of political risk.
19) Cui and Jiang (2009)	Firm	Country risk	The perceived discontinuity or unpredictability of the political and economic environment of a host country	Six-item scale questions adapted from Brouthers (2002), Agarwal (1994) and Bell (1996)	FDI entries of 138 Chinese firms from across 8 provincial areas	Survey	Country risk does not have significant impact on FDI entry mode choice of Chinese firms.

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20) Cuypers and Martin (2009)	Firm	Exogenous uncertainty; Endogenous uncertainty	Uncertainty of which the resolution is unaffected by the actions of the firm; Uncertainty that is resolved (at least in part) by the actions of the firm itself over time	Economic uncertainty (Euromoney Country Risk), institutional uncertainty (Special Economic Zones or Coastal regions), exchange rate uncertainty (parallel market premium); Cultural uncertainty (Kogut and Singh), uncertainty about development capabilities (involvement of development activities), scope-related uncertainty (the number of activities performed)	6472 Sino-foreign joint ventures (JVs)	Secondary	Conventional real options logic is applicable when uncertainty is resolved exogenously, but not when it is resolved endogenously.
21) Datta, Musteen, and Basuil (2015)	Firm	Downside risk; Political risk	Not defined; The likelihood of political and social events in a country influencing the business climate in a way that negatively impacts investors	Greenfield investment, as compared to acquisition; ICRG	291 cross-border acquisitions and 105 greenfield start-ups by non-diversified US manufacturing firms	Secondary	Managerial equity ownership and the proportion of contingent pay in key managers' compensation structures increase the likelihood of cross-border acquisitions over greenfield investments. Host country political risk positively moderates this relationship.
22) De Beule, Elia, and Piscitello (2014)	Firm	Endogenous uncertainty; Exogenous uncertainty	Related to the investment itself and can often be found as relationship-specific uncertainty when firms are sourcing intangibles externally for new business development; Take the form of either environmental turbulence or technological newness	Proxied by investments by EMNEs, as compared to those by advanced country MNEs (AMNEs); Proxied by investments in high-tech industries, and by institutional distance	451 acquisitions by foreign firms in Italy between 2001 and 2010 in 78 manufacturing industries	Secondary	EMNEs acquire significantly less ownership than AMNEs, especially in high-tech industries. Institutional distance in trade and investment freedom increases the probability to undertake full acquisition for EMNEs as opposed to AMNEs.

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23) Delios and Beamish (1999)	Firm	Country risk	Extent of political and economic risk	Euromoney Country Risk	1424 greenfield subsidiaries of Japanese manufacturing firms	Secondary	Weak evidence on the negative relationship between host country political and economic risk and ownership levels
24) Delios and Henisz (2000)	Firm	Public expropriation hazard; Private expropriation hazard	Threats to firms' revenue streams posed by the monopoly of the state on coercion; Opportunistic behaviour of partners due to incomplete contract	Political Constraints (POLCON), and equity restrictions surveyed by World Competitiveness Report; R&D/advertising-to-sales	2827 greenfield FDI by 660 Japanese firms in 18 emerging economies	Secondary	Host country experience (industry experience) mitigates the effect of public (private) expropriation hazard, leading to higher (lower) equity ownership.
25) Delios and Henisz (2003a)	Firm	Policy uncertainty	Both the probability of a policy change and the likelihood that any change is likely to be adverse	POLCON (policy change), and the size of the host country's manufacturing sector as a percentage of GDP (competitors' lobbying effort)	6465 FDI of 665 Japanese manufacturing firms in 49 countries from 1980 to 1998	Secondary	As uncertainty in the policy environment increases, initial entry by distribution is replaced by an initial entry by a joint venture manufacturing plant.
26) Delios and Henisz (2003b)	Firm	Political hazard	Uncertainty in the host policy environment due to weak institutional constraints on policy makers	POLCON	3857 entries by 665 Japanese manufacturing firms from 1980 to 1998	Secondary	Experience with political hazard countries help firms to expand to high hazard countries whilst market- and cultural-based experience helps them enter low hazard countries.
27) Demirbag, Glaister, and Tatoglu (2007)	Firm	Political risk; Risk perception	Not defined; Not defined	POLCON; Linguistic distance	6838 foreign equity ventures in Turkey as of 2003	Secondary	Both political constraint and linguistic distance induce MNEs to opt for majority owned JVs.

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28) Demirbag, McGuinness, and Altay (2010)	Individual	Politically based uncertainty	Not defined	Perceptual measures based on PEU but extended to other institutional elements	Turkish firms investing in the transitional economies of the Central Asian Republics.	Survey	Perceived ethical-societal uncertainties is positively associated with the choice of joint venture over wholly owned subsidiary. Perceived risk of intervention increases the likelihood of joint venture.
29) Duanmu (2012)	Firm	Political risk; Economic risk	Not defined; Not defined	ICRG	264 entries by 189 Chinese MNEs investing in 47 countries from 1999 to 2008	Secondary	State owned enterprises (SOEs) respond to political risk less negatively than non-SOEs. Economic risk is insignificant to both SOEs and non-SOEs.
30) Duanmu (2014)	Firm	Expropriation risk	The deficiencies of a country's protection of private property rights, especially their protection against government expropriation	Property right protection index constructed by the Heritage Foundation	894 greenfield investment by Chinese firms from 2003 to 2010	Secondary	Political relations between home and host state mitigates the negative impact of expropriation risk on FDI. Both SOEs and private firms benefit, but SOEs benefit more. Only SOEs benefit from host country's export dependence on the home country.
31) Dunning (1981)	Country	Country risk	Not defined	Business Environment Risk Index (expert survey)	FDI flows from 67 countries from 1967-1978	Secondary	Country risk does not affect FDI flows.
32) Erramilli and Rao (1993)	Firm	Country risk	Volatility in the external environment of the host country	Categorical variable of high vs. low risk country	114 US service firms engaged in FDI	Survey	Country risk intensifies the negative relationship between asset specificity and shared ownership mode.



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33) Fatehi and Safizadeh (1994)	Country	Political risk	Political-event-induced policy changes that could have a negative impact on foreign firms	Count of socio-political disturbance events	Annual flow of US manufacturing, mining, and petroleum FDI in 14 developing countries over the period 1950-1982	Secondary	The relationship between FDI flow and political risk is industry specific.
34) Feinberg and Gupta (2009)	Firm	Country risk	A multidimensional construct encompassing many types of country-specific political and economic hazards that share common institutional drivers	The risk of contract repudiation in the IRIS dataset provided by ICRG	3739 subsidiaries of 1279 US-based MNEs in 19 countries, from 1983 to 1996	Secondary	Under uncertainty, MNEs increase the extent of their within-firm sales. Trade internalisation as a response to country risk is weaker when MNEs have greater experience deploying political strategies.
35) Fernández-Méndez, García-Canal, and Guillén (2015)	Firm	Governmental discretion	The degree to which governments can unilaterally alter the conditions in which firms operate in a country, in a way that affects investments' profitability	POLCONV	FDI location choices made from 1986 to 2008 by 105 Spanish firms listed on the Madrid Stock Exchange in 1990	Secondary	The willingness of regulated physical infrastructure firms to invest in countries with governmental discretion increases in countries having both a legal system from the same family as the one of the home country and infrastructure voids.
36) Figueira-de-Lemos and Hadjikhani (2014)	Firm	Risk and uncertainty	Uncertainty consists of two types; pure uncertainty is associated with the unpredictability of the future events and contingent uncertainty refers to the lack of knowledge. Risk is a function of commitment and uncertainty.	Illustrated with graphs	93 interviews with 25 Swedish and 17 Iranian managers involved in the nine Swedish MNEs' foreign operations in Iran before, during and after the 1978/79 Islamic Revolution	Case study	An environmental change is perceived as low risk induces incremental commitment of tangible assets, while firms decrease tangible assets and commit in a more intangible way when facing a detrimental change of environment.

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37) Filatotchev, Strange, Piesse, and Lien (2007)	Firm	Risk preference	Not defined	Inferred from the equity stake of different shareholders	285 FDI by 122 Taiwanese firms in China, 1999-2003	Secondary	Risk preferences of family and institutional shareholders determine equity commitment.
38) Fisch (2008a)	Firm	Uncertainty	A continuous variable reflecting environmental volatility, which can be resolved by a wait-and-see approach.	The standard deviation of the 6-month rate of change of the Composite Leading Indicator within a country and year	5379 entries in the manufacturing sector by 2282 German firms in OECD countries over 5 years	Secondary	Under the moderating influence of competition, the economic uncertainty in a host country has a U-shaped influence on the moment of entry. Uncertainty has a negative effect on the amount of capital at entry, but no effect on the share in capital at entry.
39) Fisch (2008b)	Firm	Exogenous uncertainty; Endogenous uncertainty	The time-variant volatility of the host country environment; A disability of the investor to control the subsidiary	The standard deviation of the 6-month rate of change of the Composite Leading Indicator within a country and year; International experience – the number of foreign subsidiaries held by the investor prior to the focal entry	643 projects in the manufacturing sector by German firms in OECD countries	Secondary	The investment rate in new foreign subsidiaries depends negatively on the economic volatility of the host country but positively on the firm's international experience. The influence of uncertainty declines over time after the entry.
40) Forlani, Parthasarathy, and Keaveney (2008)	Individual	Risk perception; Risk propensity	Risk as capital losses; Not defined	Perceived riskiness rating on psychometric scales; Risk preference measured by Schneider and Lopes (1986)	187 export managers across a large mid-western metropolitan area in US	Field experiment	Managers in lower-capability firms see the least risk in the non-ownership entry mode whilst those in higher-capability firms see the least risk in the equal-partnership entry mode.
41) Garcia-Canal and Guillén (2008)	Firm	Policy risk	The likelihood that the government might change policies in a way that adversely affects the interests of the foreign investors.	POLCON	Entries of 25 Spanish listed companies in regulated industries into Latin American	Secondary	Firms from regulated industries prefer high policy risk. Firms with state equity (increased foreign experience) exhibit more (less) tolerance for political risk.

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42) Gatignon and Anderson (1988)	Firm	Country risk	Environmental threat to the stability of business operation	Categorical variable featuring low, moderate and high risk countries	1267 entries of firms among the largest MNEs over the period 1960-1975	Secondary	In highly risky countries, firms avoid outright ownership of their subsidiaries.
43) George, Wiklund, and Zahra (2005)	Firm	Risk propensity	Not defined	Inferred from scale and scope of internationalisation	889 SMEs headquartered in Sweden	Survey	Increased ownership by SMEs' managers can induce risk aversion. The involvement of institutional investors in SMEs' strategic decisions reduces managers' risk aversion.
44) Goerzen, Sapp, and Delios (2010)	Firm	Environmental risk	Financial and economic risks defined as fluctuations in the overall level of economic activity and prices in a country;  Political risk defined as the possibility of political change and the feasibility of policy change by a host country government;  Cultural risk defined as the difficulty of predicting the actions of others	Economic, financial and political risk measured by ICRG, cultural risk measured by Kogut and Singh (1988) index	305 Japanese FDI announcements including 168 JVs and 137 wholly owned subsidiaries (WOS)	Secondary	Firms' direct and indirect experience plays a significant role in mitigating the stock market's responses to host country risk.
45) Globerman and Shapiro (2003)	Country	Foreign exchange risk;  Political instability	Currency volatility;  Not defined	The degree of exchange rate volatility against the US dollar over the sample period;  World Governance Indicators' (WGI) Political Instability and Violence index	FDI flows from US to 88 countries over the period 1995-1997	Secondary	Political instability does not affect FDI flows at all while foreign exchange risk is rarely significant.

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46) Heidenreich, Mohr, and Puck (2015)	Individual	Uncertainty	Uncertainty involves both downside risks and upside potential.	Factor-market uncertainty, political-regulatory uncertainty, and socio-cultural uncertainty	Secondary data and interviews with two key decision-makers involved in a firm's investment in Ghana	Case study	The possible use of political strategies reduces entrepreneurs' perceived uncertainty regarding a developing country. Past experience in developed countries induces entrepreneurs to believe that their skills can outweigh the external threats.
47) Henisz (2000)	Firm	Political hazard; Contractual hazard	The feasibility of policy change by the host country government which either directly or indirectly diminishes MNEs' expected return on assets in the host country;  Comprised of asset specificity, hazard of technological leakage and hazard of free riding on reputation and brand name	POLCON (formal), and unexpected corruption level measured corruption level in International Country Risk Guide minus POLCON (informal);  Ratio of property, plant and equipment/R&D expense/advertising expense to total sales	3389 foreign manufacturing operations established by 461 US firms in 112 countries	Secondary	The effect of political hazard on the probability of choosing a majority owned entry mode is contingent on contractual hazard.
48) Henisz and Delios (2001)	Firm	Firm specific uncertainty; Policy uncertainty	Not defined, but referring to the uncertainty derived from an organisation's unfamiliarity with market characteristics, and the uncertainty derived from characteristics of the policymaking apparatus of a market that make the characteristics of the market unstable or difficult to forecast	Log of the sum of subsidiary years of manufacturing experience in a prospective host country;  POLCON	2,705 overseas investments made by 658 Japanese listed firms in new manufacturing plants in 52 countries during the 1990-96	Secondary	Imitating the behaviour of several reference groups of firms helps reduce the firm-specific uncertainty, but cannot mitigate the negative impact of policy uncertainty associated with a host country.

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49) Henisz and Delios (2004)	Firm	Political hazard; Regime change	The likelihood of change in the status-quo policies that affect firms' costs, revenues and asset values;  Unpredictability of the environment arising from the changes in political institutions to an entirely new structure	POLCON; Polity index	2,283 foreign subsidiaries, formed during 1991–2000 by 642 Japanese manufacturing firms in 52 countries	Secondary	Under a stable political regime, peer exits increase the probability of exit and firm experience reduce it. Under a changing regime, peer exists continue to provide informational signals regarding the environment but the experience-based influence with the old regime proves a liability.
50) Herrmann and Datta (2002)	Firm	Risk exposure	Not explicitly defined, but associated with the extent of resource commitment and switching cost	Proxied by full-control vs. shared-control entry mode	271 foreign entries by US listed manufacturing firms	Secondary	Successor CEOs' increasing tenure and international experience encourages full-control (riskier) entry mode.
51) Holburn and Zelner (2010)	Firm	Policy risk	The risk that a government will opportunistically alter policies to expropriate an investing firm's profits or assets	POLCON	FDI of global private electricity-industry firms during the period 1990–1999	Secondary	Firms from home countries with weak institutional constraints or strong redistributive pressures are less sensitive to host-country policy risk
52) Hsieh, Rodrigues, and Child (2010)	Individual	Risk perception	1) the perception that the JV performance could decline in the foreseeable future; 2) the perception that the relationship between a foreign partner and its local partner could deteriorate in the foreseeable future; 3) the perception that a partner could be unreliable or unwilling to commit itself to the collaborative venture; and 4) the perception that a partner could not be trusted	Perceptual measures developed for this study	71 foreign expatriates of IJVs established in Taiwan from 1983-2003	Survey	Partners' perception of risk mediates the effect of JV situational conditions on post-formation control.

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53) Jiménez (2010)	Firm	Political risk	Not defined	Economic Freedom Index by Heritage Foundation, Corruption Perceptions Index by Transparency International, and POLCON	166 Spanish MNEs in 119 countries at the year 2005	Secondary	MNEs with a broader international expansion tend to invest in more politically risky places. A higher level of diversity in the host countries' political risk is associated with a greater scope of internationalisation.
54) Jiménez, Luis-Rico, and Benito-Osorio (2014)	Firm	Political risk	The probability of a government using its monopoly over legal coercion to refrain from fulfilling existing agreements with an MNE, in order to affect the redistribution of rents between the public and private sector.	Average and variance scores of Corruption Perceptions Index by Transparency International and POLCON for the investment location portfolio of each MNE	164 Spanish MNEs with investments in 119 countries	Secondary	Exposure to political risk increases a firm's scope of internationalisation. The relationship is stronger in those companies belonging to industries subjected to higher levels of regulation by the authorities.
55) Jiménez, Benito-Osorio, and Palmero-Cámara (2015)	Firm	Political risk	Not defined	POLCONV	119 Spanish firms with more than 250 employees and more than one product line	Secondary	MNEs that have experience in high political risk environments are more likely to tolerate risk and find a suitable environment to achieve economies of scope.
56) Jiménez and Delgado-García (2012)	Firm	Political risk	Not defined	Corruptions Perception Index, POLCONV, and Economic Freedom by the Heritage Foundation	164 Spanish MNEs with investments in 119 countries	Secondary	The level of political risk assumed by the MNEs has a positive influence on their performance and vice versa.
57) Kim and Hwang (1992)	Firm	Country risk	Not defined	Managers' perceptions about the instability of host political system and the likelihood of adverse policies	96 US manufacturer that have recently engaged in international expansion	Survey	High country risk leads to low commitment entry mode.

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58) Kim, Hwang, and Burgers (1993)	Firm	Corporate risk	Not defined	Standard deviation of firm's return on assets	125 large US MNEs over a 5-year period	Secondary	A new risk-adjusted return measure suggests that high return-low risk profile can be achieved through international diversification.
59) Kiss, Williams, and Houghton (2013)	Individual	Internationalisation risk bias	The difference between objective risk and subjective risk perception	Compare OECD country risk measures with managers' rate on the riskiness of host countries	CEOs of 286 firms that internationalised early	Survey	Internationalisation risk bias mediates the relationship between internationalisation motivation and post-entry scope.
60) Kobrin (1976)	Country	Political risk	Discontinuities in the political environment that potentially affect the profit or other goals of a particular firm	A composite measure based on political event data, including political rebellion, government instability and planned subversion	The number of new manufacturing subsidiaries established by 187 large US manufacturer in 61 countries over the period 1966-1967	Secondary	Political risk does not affect FDI flows.
61) Kwok and Reeb (2000)	Firm	Corporate risk	Not defined	Total risk, measured as the standard deviation of monthly returns using 60 months of return data	1921 public firm from 32 countries in which 1007 are MNEs, over the period 1992-1996	Secondary	Emerging country firms see a decrease in total and systematic risks as they increase the degree of internationalisation. The effect is opposite for developed country firms.
62) Levis (1979)	Country	Political instability	Not defined	Political competition index regarding the legitimacy of political system	FDI flows from 25 developing countries over the period 1965-1967	Secondary	Political instability deters FDI, but of secondary importance to economic factors.

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63) Li and Yao (2010)	Firm	Policy uncertainty	Political institutions that allow policy-makers to change the policy regime capriciously	Provincial level index consisting of five factors: lagged unemployment rate; employment in SOEs as a percentage of provincial population; total provincial government budgetary expenses as a percentage of GDP; provincial government employment as a percentage of provincial population; and FDI policy incentives (the existence of special economic zones (SEZs) and coastal open cities in the province)	All foreign-invested manufacturing ventures established in China over 1979–95 by firms from other emerging economies	Secondary	EMNEs are more likely to be influenced by prior entries from their home country than by firms from other countries. Prior investments by developed economy firms deter new entries by emerging economy multinationals. Policy uncertainty leads to a stronger effect of mimicry.
64) Liang, Lu, and Wang (2012)	Firm	Risk-taking tendency	Not defined	Inferred from the act of internationalisation and entry mode	553 Chinese private firms in eight major cities spreading across Pearl River delta and Yangtze River delta region	Survey	The likelihood of private firms choosing a high-risk entry mode is determined by organizing capability advantages over SOEs, and disadvantages compared to foreign firms.
65) López-Duarte and Vidal-Suárez (2010)	Firm	External uncertainty	Uncertainty perceived by the investing company in the formal and informal institutional environment	Political risk measured by Euromoney Risk Index; Cultural distance measured by Kogut and Singh Index	334 FDI by 63 listed Spanish firms in 34 countries between 1989 and 2003	Secondary	An interaction effect between two dimensions of external uncertainty on entry mode choice
66) Loree and Guisinger (1995)	Country	Political instability	Not defined	ICRG	Survey data on foreign subsidiaries of US firms in 48 countries in 1977 and 1982	Secondary	Political risk has a negative impact on equity FDI in 1982 but not in 1977.



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67) Lu, Liu, Wright, and Filatotchev (2014)	Firm	Investment risk	Not defined	WGI's Regulatory Quality index	702 FDI entries of Chinese listed firms over the period 2002-2009	Secondary	Favorable host country institutions can offset the need for prior international experience in EE firms' FDI activities.
68) Luo (2001)	Firm	Environmental hazard	Not defined	Government intervention, environmental uncertainty and property right protection measured on scales	174 foreign subsidiaries in China across Yangtze River Delta and Pearl River Delta cities	Survey	Joint venture is preferred when perceived governmental intervention or environmental uncertainty is high and wholly-owned entry mode is preferred when intellectual property rights are not well protected.
69) Maitland and Sammartino (2015a)	Individual	Political hazard	The broad spectrum of possible actions and outcomes flowing from the sovereign state's monopoly control of formal rule setting and enforcement, when the status quo is maintained or changes to the status quo occur	POLCON and the authors' typology of political hazard	Interviews and surveys with an MNE's 11 senior executives and board directors, triangulated with corporate materials	Interview, survey and secondary	Individual managers bring different cognitive resources to the firm decision process of entering a politically hazardous country. The difference is a function of managers' experience breadth and diversity.
70) Meschi and Riccio (2008)	Firm	Country risk	Not defined	Scores of economic risk and political risk provided by Political Risk Services	222 international joint ventures in Brazil, 1973-2006	Secondary	Survival of international joint ventures is not affected by country risk.
71) Michel and Shaked (1986)	Firm	Firm risk	Not defined	Total risk and systematic risk measured by Sharpe and Treynor measure (beta)	58 large US MNEs and 43 domestic firms among Fortune 500	Secondary	Domestic firms have higher total and systematic risk than MNEs.
72) Oetzel and Oh (2014)	Firm	Discontinuous risk	The possibility that a disaster, which is episodic and often difficult to anticipate or predict, might occur and may have a substantial impact on a firm and its operating environment	The number of incidents, number of people killed, and duration of terrorist attacks, natural disasters and technological disasters respectively	106 large European MNCs and their subsidiaries operating across 109 countries during 2001-2007	Secondary	Experience with high-impact disasters encourages expansion within but not entry into other countries suffering the same disaster.

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73) Oh and Oetzel (2011)	Firm	Disaster risk; Political risk	Terrorist attacks, natural disasters, and technological disasters;  Political instability	Number of people killed by each disaster risk;  WGI's Political Instability and Violence index	71 European Fortune Global 500 firms and their subsidiaries from 2001 to 2006	Secondary	Post-entry disaster risk increases subsidiary-level disinvestment. Political stability mitigates the impact of disaster risk.
74) Pak and Park (2004)	Firm	Political risk	One of internalisation costs in the form of discrimination against foreign firms and expropriation	Stability of political situation measured by World Competitiveness Report	3,236 foreign subsidiaries of 444 Japanese manufacturing firms as of 1999	Secondary	Political risk leads to low ownership mode.
75) Puck, Rogers, and Mohr (2013)	Firm	Risk exposure	Caused by the comparatively under-developed institutional frameworks and more rapid changes in the investment climate	Self-reported perceptual measure of a subsidiary's exposure to legal, political, and economic risks	173 subsidiaries in Brazil, China, India, Russia, South Africa and Turkey	Survey	Whether political strategies can reduce firms' risk exposure depends on a) if they sell to businesses or end consumers and b) the specific strategies being employed.
76) Quer, Claver, and Rienda (2012)	Firm	Political risk	Institutional constraints related to political and legal regime that may negatively affect economic activity	ICRG	139 investments made by 29 Fortune 500 Chinese firms in 52 countries between 2002 and 2009	Secondary	Political risk is not related to FDI location choice.
77) Ramasamy, Yeung, and Laforet (2012)	Firm	Political risk	Not defined	WGI's Political Instability and Violence Index	FDI projects of 63 large Chinese listed firms over the period 2006-2008	Secondary	SOEs are attracted to politically risky countries, whilst the effect is not significant for private firms.
78) Ramos and Ashby (2013)	Firm	Organised crime risk	Provide only definition of organised crime	Denounced homicides per capita; Country crime score by Global Competitiveness Report	FDI of 9 industries from 103 countries into the 32 Mexican states from 2001 to 2010	Secondary	Home country experience with organised crime increases MNEs' investment in host countries with high level of organised crime.

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79) Reeb, Kwok, and Baek (1998)	Firm	Systematic risk	Earning volatility	Portfolio beta instead of individual security beta	880 or 844 MNEs over the period 1987-1996, depending on different dependent variables	Secondary	Internationalisation may incur additional risk like exchange risk, political risk and information asymmetry that offset the benefit of diversification, leading to a positive relationship between internationalisation and systematic risk.
80) Reuer and Leiblein (2000)	Firm	Downside risk	A probability-weighted function of below target performance outcomes	Lower partial moments based on ROA, ROE and CAPM beta	357 US manufacturing firms over the period 1985-1994	Secondary	Corporate multinationality is not significantly related to downside risk, and firms that are more active in engaging in IJVs obtain higher levels of downside risk.
81) Richards and Yang (2007)	Firm	Environmental uncertainty; Behavioural uncertainty	Caused by unexpected occurrences in the political, economic, and social environment;  Arises from partner opportunism	ICRG;  Whether the JV also engaged in marketing activities, and the frequency of prior joint venture collaboration with the same partner	543 international R&D joint ventures by foreign firms in China, India, Japan, and the United States over 1985 to 2004	Secondary	The influence of environmental uncertainty (country risk) on MNEs' equity ownership in R&D IJVs is insignificant. MNEs require a higher equity ownership for R&D JVs that also engage in marketing.
82) Rugman (1976)	Firm	Corporate risk	Not defined	Risk as variance in return	Large US firms among Fortune 500 over the period 1960-1969	Secondary	A risk reduction advantage of MNEs over domestic firms
83) Lee and Song (2012)	Firm	Macroeconomic uncertainty	Not defined	Depreciation of currency of each host country	Foreign subsidiaries of publicly listed Korean manufacturing firms in 61 countries from 1990 to 2007	Secondary	The increase of a subsidiary's production at the time of its host country currency depreciation decreases the production of other subsidiaries within the same MNC network.

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84) Schneider and Frey (1985)	Country	Political instability	Internal political troubles that disrupt economic process and pose threats to MNEs like nationalisation	Number of political strikes and of riots	FDI flows from 54 developing countries for the year 1976, 1979 and 1980	Secondary	Political instability negatively affects FDI flows.
85) Schwens, Eiche, and Kabst (2011)	Firm	Formal institutional risk	The constraints resulting from insufficiently developed market support institutions in the host country	Hermes Country Risk Rating, dividing countries into 7 categories based on economic, political, and legal situation in the host country	227 internationally active German SMEs	Survey	Formal institutional risk moderates the relationships between international experience, proprietary know-how, strategic importance, and equity based entry modes.
86) Sethi, Guisinger, Phelan, and Berg (2003)	Country	Political and economic stability	Not defined	ICRG	FDI flows from US to 17 West European and 11 Asian countries from 1981 to 2000	Secondary	Very weak effect of political and economic stability on FDI flows
87) Shan (1991)	Firm	Contextual risk; Transactional risk	Risks out of firm's control; Risk can be reduced or eliminated through internalisation of markets or integration	Proxied by location, amount of investment, investment duration and business scope	141 Sino-American joint ventures formed between 1980 and 1987 in China	Secondary	Publicly listed firms are less risk averse than non-listed firms.
88) Shrader, Oviatt, and McDougall (2000)	Firm	International risk	With reference to Miller's (1992) framework	Inferred from country risk, entry mode commitment and foreign sales ratio, country risk measured by Euromoney, Institutional Investor and Wall Street Journal ratings	212 entries of 87 US firms that had both made an IPO and entered foreign markets within first six years of birth	Secondary	Firms tradeoff among foreign revenue exposure, country risk, and entry mode commitment in each country to keep the risk profile manageable.
89) Slangen and van Tulder (2009)	Firm	External uncertainty	Not defined	Aggregate WGI index	231 entries by 150 Dutch MNEs into 48 countries	Survey	Both cultural distance and political risk are suboptimal proxy for external uncertainty.

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90) Slangen and Beugelsdijk (2010)	Firm	Institutional hazard	Not defined, but decomposed into two types, exogenous and endogenous hazard, depending on whether it can be resolved once realised	Aggregate WGI index (exogenous), cultural distance measured by a Euclidean distance version of the Kogut and Singh (1988) Index (endogenous)	Sales by US foreign affiliates to affiliated and local unaffiliated customers in 46 countries over the period 1996-2004	Secondary	The impact of institutional hazards on the amount of foreign MNE activity is contingent upon the type of foreign activity (horizontal or vertical) and the type of institutional hazard (governance or cultural).
91) Slangen (2013)	Firm	Policy uncertainty	Sudden policy change stemming from political constraints shortages	POLCON	172 wholly owned greenfields and full acquisitions by 122 Dutch MNEs in 33 foreign countries from 1995 to 2003	Survey	Policy uncertainty increases the likelihood of wholly owned greenfield over full acquisition. Planned subsidiary autonomy, expected industry performance, and religious distance moderate this relationship.
92) Strange, Filatotchev, Lien, and Piesse (2009)	Firm	Risk preference	Not defined	Inferred from equity stake in foreign affiliates, along with cultural and historic links with the home country	285 FDI projects by Taiwanese listed firms in China between 1999-2003	Secondary	Firms balance out resource commitment and locational risk. Different shareholders have different risk preferences that influence location choice.
93) Tseng and Lee (2010)	Firm	Environmental uncertainty	Not defined	Managers' perceptions about unpredictability of market environment and institutional environment	84 Taiwanese manufacturing firms that have foreign operations	Survey	In the presence of high turbulent market and institutional uncertainty, firms with stronger market linking capability are more likely to choose WOS over JV.