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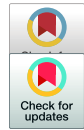
How does experience change firms' foreign investment decisions to non-market events?

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ABSTRACT

We examine how experience with two types of non-market risks (e.g., natural disasters and armed conflicts) changes foreign direct investment (FDI) decisions. Extending research on organizational learning and FDI, we hypothesize that the greater the experience with recent, frequent and high-intensity risk, the more likely that experience can moderate the relationship between non-market risks and firm international expansion. Given a sample of 625 Fortune Global 500 firms and their investments in 117 countries between 1999 and 2008, we find that experience with recent, frequent, and high-intensity risk can change a firm's FDI decision from risk avoidance to risk management.

1. Introduction

Although the popular press and management consulting firms often emphasize the importance of non-market risks to firms and society, evidence shows that most firms do not prepare or manage non-market risks well. Non-market risks include social, political, legal, environmental, and technological risks, and can create major business disruptions and threaten firm survival (Oetzel and Oh, 2015, p. 263). Non-market risks can be divided into two categories based on the involvement of human factors (Oh, 2017): human-made and natural disaster risks. Human-made risks include political risks, violent conflicts and any problem caused by human activity. By contrast, natural disaster risks, or acts of God as they are sometimes called, include natural disasters, such as floods, droughts, typhoons, earthquakes, and tornados.

Multinational corporations (MNCs) often face non-market risks in their current locations and as well as in new target markets. According to the literature on addressing foreign direct investment (FDI) risk, experience in other countries is a key knowledge-based resource that can be transferred to a new country (Delios and Beamish, 2001; Jain et al., 2016; Kogut and Zander, 1993; Martin and Salomon, 2003; Putzhammer et al., 2020). Meanwhile, it is found that experience can be context-specific and therefore more valuable in similar environments (Jandhyala, 2013; Li and Meyer, 2009; Oh and Oetzel, 2017; Perkins, 2014). Further, some studies show that experiential learning from non-market risks can moderate, to a certain extent, the negative effect of risks on entry and expansion in foreign countries (Delios and Henisz, 2000, 2003; Holburn and Zelner, 2010; Jiménez et al., 2018; Oetzel and Oh, 2014; Oh and Oetzel, 2017; Perkins, 2014).

However, many firms do not have clear plans or strategies for managing non-market risks. For instance, non-essential

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manufacturing and retail companies had to stop their operations amid the COVID-19 outbreak in many affected countries due to the disruption of their supply chains, low demand, fear of worker safety, and guidelines and orders from governments. This created an economic crisis for many workers and businesses (Semuels, 2020). Even though some of these businesses experienced disruptions from similar outbreaks in the past, such as severe acute respiratory syndrome (SARS), swine influenza, and Ebola virus disease, few were prepared for COVID-19. Likewise, political violence, such as the Arab Spring, significantly hurt both local and global businesses and economic conditions more broadly (Knowledge@Wharton, 2012). In fact, Buckley et al. (2020) note that the mechanisms behind organizational learning may only apply to endogenous risks, not exogenous risks such as natural disasters. However, there are examples of firms that are more resilient and have better business continuity plans which were built based on prior experience (Oetzel and Oh, 2014). In this paper, we examine the conditions under which experience with non-market risks can become valuable firm-specific advantages and resources that can be shared and transferred to other locations.

To do so, we draw on organizational learning theory which assumes that organizational learning is a cumulative process that occurs over time (Argote and Miron-Spektor, 2011). Organizational learning has been applied to international management to examine how MNCs can learn from their experiences and leverage them to formulate their international strategies (Andersen, 1993; Delios and Beamish, 2001). More specifically, research in this area has focused on how and whether MNCs can learn from their experiences in different cultural, institutional, and political contexts, and whether they can transfer them to new environments (Delios and Henisz, 2003; Holburn and Zelner, 2010; Lord and Ranft, 2000; Dikova and Van Witteloostuijn, 2007).

Organizational learning relies on how organizations learn from their routines (Argote and Miron-Spektor, 2011). It can be difficult to apply learning to discontinuous and/or disconnected events experienced by an organization since they are, by definition, not routine. Recently, some studies tried to examine whether organizations can learn from rare and exogenous events. For example, Oh and Oetzel (2017) examine the role that previous experience with violent conflict plays in the relationship between violent conflict risks and subsidiaries' investment decisions. The authors find that firms can learn from violent conflict risks but only if the experiential learning occurs in the same country context. Likewise, Buckley et al. (2020) compare experiential learning from endogenous and exogenous risks and find that firms can leverage experiential learning only with endogenous risks. In the context of non-market risks and FDI, the key questions are 'when' and 'how' some firms are willing to continue operating or even to expand their investment in high risk countries.

This paper also responds to recent calls for phenomena-driven research and research on grand challenges in international business and management (Buckley et al., 2017; Doh, 2015). We analyze a long-standing question in FDI research, that is, what factors influence MNCs' FDI location choice decisions, but we do so in the context of a relatively understudied phenomena; countries experiencing natural disasters and armed conflicts, two types of non-market risk (Doh, 2015). While the literature on MNC FDI decisions has examined how such non-market risks affect MNC strategy and performance and whether MNCs are able to cope with such risks, the literature has not tended to investigate how different characteristics of experience changes MNCs' investment decisions in response to such episodic non-market risks. In this paper, we provide empirical evidence that experience with non-market risks may enable MNCs to change their risk-response behavior from risk avoidance to risk management.

Changing managers' mindsets from one of risk avoidance to risk management, particularly when the threats are largely outside the control of individuals, is challenging since it is human nature to avoid risk (Slovic, 2000). Researchers across many business disciplines have shown that managers tend to be more motivated to avoid losses than they are to pursue gains (Kahneman and Tversky, 1979). For example, managers making FDI location decisions are known to avoid entering foreign countries and locations with a high degree of non-market risk (Dai et al., 2013; Li and Vashchilko, 2010; Oetzel and Oh, 2014; Staw et al., 1981). While there may be opportunities in a market, the threat of major disaster and financial loss may outweigh the potential benefits.

MNC managers who have made long-term FDI decisions, however, know that predicting what will happen in one year, let alone in five, 10 or 20 years in a particular market, is a tall order if not an impossible one. Despite the best efforts of many highly skilled analysts, a variety of non-market risks – from violent conflicts to natural disasters – have proven to be highly resistant to prediction (Perrow, 2011). Thus, approaching risk from a risk avoidance perspective can, at times, lead firms to forgo important business opportunities. Steve Culp, a senior managing director of Accenture Finance and Risks Services, agreed with this tendency saying that, "[o]rganizations tend either to accept (or ignore) these risks [i.e., political risks], or to avoid altogether situations that seemingly pose large political risks, even when those risks are accompanied by significant opportunity" (Culp, 2012). What we know from research and anecdotal evidence, however, is that not all firms exit their location when confronted with major non-market risks that are largely exogenous to the firm (Dai et al., 2017; Oetzel and Oh, 2015). Thus, given the challenge of how to respond to nonmarket risk, our objective is to investigate how recent, frequent, and high intensity experience with largely exogenous non-market risks might affect subsequent MNC subsidiary location decisions, particularly in locations characterized by significant risk.

Experience is known to be a significant factor influencing MNC FDI location decisions. In fact, research shows that experience may be one of the most important factors in changing people's mindsets (Argote et al., 2000; Kolb, 2014). Of course, not all experience is equal. For instance, the more dramatic the experience the more memorable and transformative the change in perspective (Lant and Mezias, 1992; Miller and Friesen, 1984). In addition, events that happened many years ago tend to fade from memory (Golden, 1992). Another important factor is whether the experience is recent, repeated and significant enough to recall when managing similar events in the future.

To investigate how various characteristics of MNC experience can change FDI location decisions regarding major non-market risk, we examine how temporal proximity, frequency and intensity of experience with a non-market event – in our case natural disasters and armed conflicts – can change a firm's FDI location choice around responding to risk. We do so by leveraging insights from research on experiential learning to better understand how different characteristics of experience affect decision making around FDI location decisions (Argote et al., 2000; Lant and Mezias, 1992; Miller and Friesen, 1984). Using data on *ex ante* and *ex post* investment decisions,

we offer evidence that recent, repeated and high-intensity experience, proxied by firm exposure to non-market events, can change a firm's location decisions around managing risk. By doing so, we contribute toward extending the literature on organizational learning theory by providing the mechanisms of when and how MNCs learn from previous experience with rare events in making location decisions. The study also provides evidence of the need for research on the internal process of learning by showing that not all experiences are equal, and that organizational forgetting can undermine experiential learning. Second, this study provides the boundary conditions where experiential learning from episodic non-market risks becomes beneficial. In the case of non-market risks, recent, frequently occurring, and high-impact experiences are most likely to impact FDI decisions. Lastly, this study contributes to the literature on international non-market risk management by demonstrating that not all exogenous risks are unmanageable. Specifically, we suggest that in some cases, experiential learning can change seeming unmanageable risks to manageable ones.

2. Literature review and hypotheses

Non-market risks, particularly the types of major risks that we focus on here, have been known to deter investment because they generate unexpected costs. Some of these costs may arise from direct damage to a firm's facilities, disruption to supply chains, diminished employee productivity, and lost revenue, among other costs. Thus, it is not surprising that the literature shows that non-market risks discourage MNCs' entry and hurt survival (Busse and Hefeker, 2007; Dai et al., 2013, 2017; Delios and Henisz, 2003; Li and Vashchilko, 2010; Oh et al., 2020; Staw et al., 1981). In the absence of mitigating factors, this research suggests that the tendency toward risk avoidance is a common response by MNCs facing significant non-market risks. While it may be possible to ignore or avoid some low probability risks (Kahneman and Tversky, 1979; March and Shapira, 1987), relying on avoidance alone is a potentially risky approach (Oh and Oetzel, 2017).

Prior to the early 2000s, there might have been a greater possibility for MNCs to avoid a country with non-market events because those events were concentrated in geographically specific areas (Gleditsch et al., 2002). Recently, however, non-market events have been neither rare nor geographically limited. According to the Centre for Research on the Epidemiology of Disaster (CRED), over 6300 natural disasters occurred between 2000 and 2014 resulting in the death of more than one million people. Natural disasters are spreading all over the world because of global climate change (Guha-Sapir et al., 2015). Regarding armed conflicts, over 61,000 terrorist attacks occurred between 2000 and 2014, a ten-fold increase from 3329 in 2000 to 32,658 in 2014 (Institute for Economics and Peace, 2015). Figs. 1 and 2 show that non-market risks are not equally spread across countries and levels of risk are different across countries and across types of non-market risks. For armed conflicts (Fig. 1), while overall incidents of armed conflicts are low, some countries such as Algeria, Colombia, Central African Republic, Ethiopia, India, Pakistan, Philippines, Russia, South Sudan, Sudan, and Uganda, have almost one incident (or more) of armed conflict every year. For natural disasters (Fig. 2), overall incidents of natural disasters are higher than those of armed conflicts in most countries. Australia, Brazil, China, Colombia, France, Japan, Nigeria, Romania, Russia, the U.S., several South East African countries and many South and South East Asian countries have been hit by major natural disasters >4 times per year.

Due to the increasing number of disastrous events, several studies have focused on the effect of non-market risk on the international
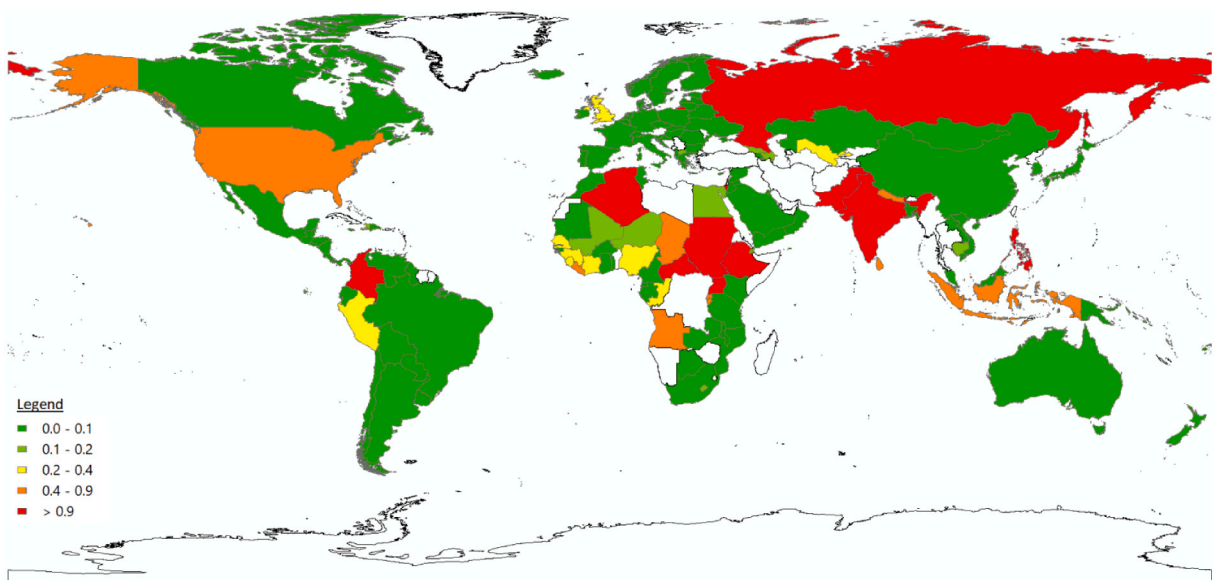
Number of armed conflict incidents (yearly average)

Fig. 1. Number of armed conflict incidents (yearly average).

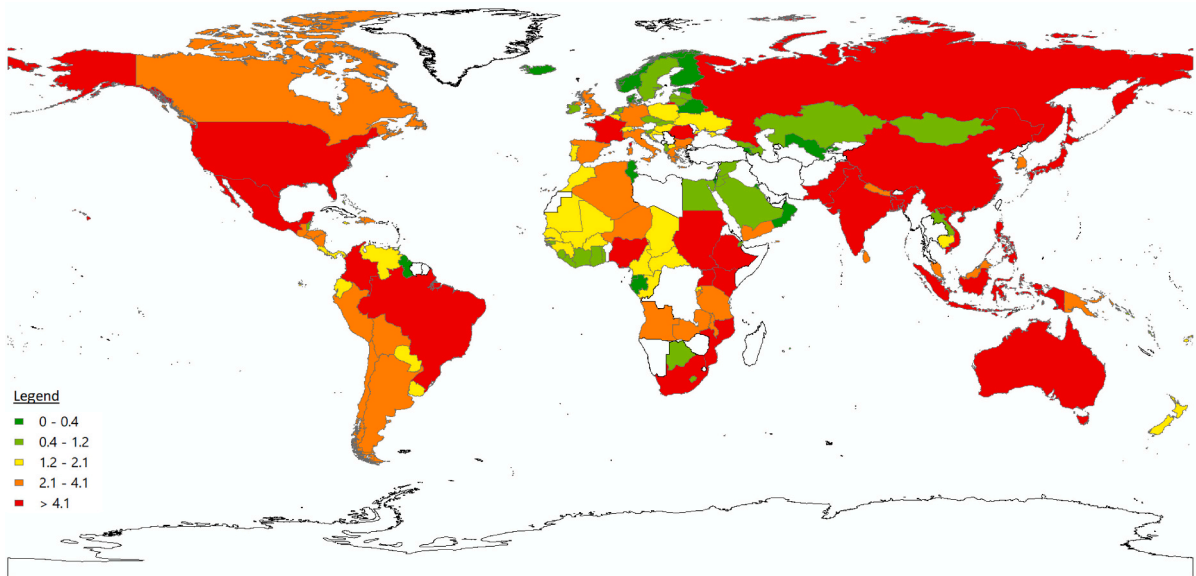Number of natural disaster incidents (yearly

Fig. 2. Number of natural disaster incidents (yearly average).

strategies of MNCs (Blake and Moschieri, 2016; Dai et al., 2013; Darendeli and Hill, 2016; Delios and Henisz, 2000; Oetzel and Oh, 2014; Oh and Oetzel, 2017). Non-market risks have the potential to negatively affect a firm's FDI decisions and its performance both directly and indirectly (Getz and Oetzel, 2009). An example of a direct impact is the destruction of a firm's valuable assets. In addition, non-market risks increase uncertainty in a firm's operating environment, which in turn indirectly contributes to increased security and insurance costs. Since such non-market events can create substantial risks for businesses, some firms respond by divesting from affected host countries. In such cases, managers' concerns about unrecoverable damages and investment losses outweigh any benefits of investment (Kahneman and Tversky, 1984).

Studies have also shown that MNCs can, in fact, learn from their experience operating in challenging environments (Delios and Henisz, 2000, 2003; Holburn and Zelner, 2010; Kolk and Pinkse, 2008; Oetzel and Oh, 2014; Oh and Oetzel, 2017; Perkins, 2014). These studies, and the approach we use in this paper, use firm exposure to risks for assessing experiential learning in MNCs and their subsidiaries, particularly as they enter into and/or continue operations in other countries. As we will discuss in detail in the next section, these studies do not investigate the specific mechanisms behind experiential learning and how they might change MNCs location decisions from risk avoidance to risk management in the face of non-market risks (Kolk and Lenfant, 2015; Oh and Oetzel, 2017).

2.1. Experiential learning and non-market risks

During the past decade, both human-made and natural disaster risks have been frequent and ubiquitous around the world. Thus, rather than assuming that major non-market risks are unmanageable, recent studies have focused on their impact on FDI decisions and how managers might deal with these risks.

Several studies have supported the idea that major non-market risks may be manageable (Frynas and Mellahi, 2003; Holburn and Zelner, 2010; Lawton and Rajwani, 2015; Mbalyohere et al., 2017). One study found that relationships with key political actors can, in some cases, translate into valuable first mover advantages, even in challenging environments (Mbalyohere and Lawton, 2018; Schnyder and Sallai, 2020). Another study noted that firms are not always "passive bystanders" when faced with political risk. Rather, MNCs can actually develop firm-specific resources for managing risk (Frynas and Mellahi, 2003, p. 541). These advantages, argue the authors, may not only enable firms to reduce risk but also to take advantage of business opportunities in politically risky environments.

Based on these and other studies, research grounded in the resource-based view (RBV) has suggested that the ability to manage non-market risk may be considered a valuable firm capability. Conceptualizing non-market risk in these terms may lead managers to adopt a proactive approach to risk management. Rather than simply reacting to threats, managers may prepare and act in anticipation that they may occur (John and Lawton, 2018). In the absence of internal resources and capabilities, however, some firms may choose to exit a country or avoid a threat, possibly forgoing valuable business opportunities (Dai et al., 2017).

Experiential learning has been shown to be an important means of obtaining valuable risk management capabilities. Studies have shown that, in some cases, firms with experience managing non-market risks in one country can develop that experience into valuable firm capabilities that can be leveraged in other markets with similar risks (Delios and Henisz, 2000, 2003; Holburn and Zelner, 2010; Oetzel and Oh, 2014; Oh and Oetzel, 2017; Perkins, 2014). In some cases, these capabilities can be transferred across borders. For

instance, studies have shown that firms may be less sensitive to uncertain non-market environments when they have gained relevant international experience elsewhere (Delios and Henisz, 2003). Likewise, MNC experience in one country can increase the longevity of MNCs in other foreign countries when the institutional environments are comparable (Perkins, 2014).

Thus experience with non-market risks, particularly prior experience operating in similar country contexts, can constitute a potentially valuable firm capability for managing non-market risks (i.e., non-market capabilities) and, in turn, increase firms' non-market performance (Bonardi et al., 2006; Holburn and Vanden Bergh, 2014). On the other hand, while these studies have focused on situations where experience is transferable, other studies have shown that while violent conflicts have a negative impact on a firm's entry decisions, these impacts are lower when the firm has country-specific experience (Oh and Oetzel, 2017).

Unlike the relatively large body of research on human-made non-market risks, few studies focus on experiential learning from natural disaster risks. Although research on how MNCs respond to natural disasters is limited, there is evidence that firms can learn from their experiences with natural disasters. One study has examined firms' experiences with three types of episodic risks: terrorist attacks, natural disasters and technological disasters (Oetzel and Oh, 2014). In this study, the authors found that natural disasters negatively affect a firm's foreign entry and expansion. If, however, the firm has experience with high-impact natural disasters, it will be more likely to expand its operations in a country than a firm that does not have experience with the same type of risks. Moreover, that experience likely increases firms' resilience and preparedness for future disasters (Hoffman and Muttarak, 2017; Oetzel and Oh, 2015). Like human-made non-market risks, experience with natural disasters may have a positive impact on firms' FDI decisions by providing a source of competitive advantage.

While there are important differences between natural disasters and violent conflicts, we suggest that these two types of risks are non-market risks because they share several traits that may affect managers' decision making. Although certain locations may be more susceptible to certain types of natural hazards or violent conflicts, both are largely exogenous to the firm and outside of the control of managers to resolve. Thus, for both types of risk it is possible to gain valuable knowledge through experience regarding a country's ability to address these threats (John and Lawton, 2018; Kobrin, 1979).

Some human-made non-market risks, such as terrorist attacks, occur for specific political or ideological purposes and are often episodic. Other political risks are related to weak political regimes and corruption; conditions that tend to be ongoing problems in a country. In the case of natural disasters, while earthquakes and volcanic eruptions might be rarer and episodic, floods and storms occur quite regularly in certain regions and countries. Having said that, the affect of both types of non-market risks on specific business operations can be difficult to forecast accurately. Even when one can see a political regime change coming, it may still be unclear how such a change will affect specific business operations. Likewise, although storms may occur frequently and regularly in a certain location, it is difficult to forecast their exact timing, location, and severity. Furthermore, whether and how much a firm is affected by a storm is generally unknown until it actually happens.

Given this background, we aim to examine the characteristics of MNCs' experiential learning from past experiences (experience with recent, frequent, and high-intensity non-market risks) that may change their location decisions when faced with non-market risks. Understanding how firms' experiential learning from non-market risks affects firms' subsequent location decisions is important as it explains how managers prepare for and respond to those risks. For several decades now the process of organizational change, particularly with respect to the role of routines and inertia, has been a major topic in the organizational learning literature (Becker et al., 2005; Feldman and Pentland, 2003; March, 1981; Nelson and Winter, 2009). However, these studies do not suggest what spurs changes in managers' behaviors and how such changes may occur (Tsoukas and Chia, 2002). In the following sections, we argue that there are three characteristics of experience that enable MNCs to manage non-market risks around subsidiary-level investment decisions.

2.2. Recent experience and subsidiary investment decisions

When facing non-market risks, firms' FDI location decisions are typically one of "avoidance" due to the unpredictable nature of the risk (Slovic, 2000). The literature on international risk management has discussed how non-market risks in host countries affect firms' FDI decisions, including entry mode and location choice (Buckley et al., 2020; Delios and Henisz, 2003; Oh and Oetzel, 2011, 2017; Holburn and Zelner, 2010). The baseline relationship shows that non-market risks, including political risks, institutional risks and natural disasters, negatively affect FDI decisions in a way that deters or leads to disinvestment in host countries with greater non-market risks (Delios and Henisz, 2003; Globerman and Shapiro, 2003; Oh and Oetzel, 2011, 2017; Holburn and Zelner, 2010; Li and Vashchilko, 2010). Recently, research has examined this relationship at the sub-national level and found that the baseline relationship holds (Dai et al., 2013; Meyer and Nguyen, 2005; Oh et al., 2020). Of course, levels of avoidance may vary by MNCs, nationality, industry type, and many other factors. Based on firms' preferences and experiences, when MNCs confront non-market risks for the first time, some choose to take on the risk while others choose to avoid it (Dai et al., 2017; March and Shapira, 1992). For the MNCs which decide to operate despite non-market risks, experiential learning can, at times, transform how MNC managers typically respond to risk. In this way, managers can develop a new way of seeing an old problem (how to manage seemingly unmanageable risks) and find solutions that were formally hidden in plain sight (Bansal et al., 2018). However, at the same time, it is not easy to retain this experiential learning from episodic non-market risks due to "organizational forgetting." As Robert Meyer, a co-director of Risk Management, Decision Processes Center at Wharton School, stated, "when you talk to companies or individuals and ask what risks they're most concerned about, typically, they are the things that just happened yesterday. People tend to focus on the disaster that just happened" (Knowledge@Wharton, 2015).

In fact, after experiencing non-market risks, firms may forget lessons learned, either intentionally or unintentionally. They may do so because of the episodic and unrelated (disconnected) natures of armed conflict and natural disaster risks or because a firm may

consider certain lessons to be more important than others. Regardless of the reason, there is a general tendency for firms to accidentally lose information unless it is used regularly (de Holan and Phillips, 2004a; Walsh and Ungson, 1991). These arguments are supported by Howard Kunreuther at Wharton School, who said that "[p]eople do not seem to learn from the past experiences of disasters. Once they experience a disaster, they have some short-term regard for the risk. But, as time elapses, they tend to hold onto overly optimistic thoughts that a disaster will not occur to them, despite evidence indicating otherwise" (FM Global, 2010, p. 10). The notion is also recognized in the literature on organizational forgetting that suggests that if the information is not used regularly, experiential learning has a higher chance of being forgotten before it changes managers' cognition (heuristics). The reason is that the episodic and unrelated nature of non-market risks will lower the odds that firms or managers can utilize their experiential learning from past experiences in future events. For example, many people had experience with Hurricane Ike in 2008. It caused huge damage to many areas in Texas so people there learned something from this event. However, over time people seem to forget what they have learned because for almost ten years there were no catastrophic hurricanes like Hurricane Ike. Thus, preparation for another catastrophic hurricane like Hurricane Harvey did not take place.

In addition, accidental organizational forgetting occurs when job-related experiential learning is not handed down to others when the person-in-charge leaves the organization. Experiential learning is tacit knowledge, and, as such, it can be acquired by persons who have specific experience and capabilities. This problem is particularly important for MNC subsidiaries because MNCs frequently replace their expatriates every few years, and thus experiential knowledge can only stay a few years within subsidiaries (Anand et al., 1998). When facing other episodic non-market risks in a host country, an MNC may not have employees who have previous experience or knowledge. Even if the MNC finds experienced employees, their memories are likely decayed due to organizational forgetting or biased due to the episodic and unrelated nature of the risk (Casey and Olivera, 2011; de Holan et al., 2004).

Second, despite the severity of certain types of non-market risks, MNCs may forget lessons learned if the firm does not value experiential learning from such risky events. For instance, managers who see non-market risks as rare and unmanageable events are not likely to consciously retain the lessons they learned from past experiences. Further, managers may not consider lessons learned to be applicable to future events because non-market risk events likely differ from one another. There is little indication that lessons learned from Hurricane Ike (similar in scale to Hurricane Harvey), or other hurricanes to hit Texas over the last several years, were applied in advance to manage Hurricane Harvey (Keneally, 2017). Perhaps managers considered prior events to be too different from Hurricane Harvey. If disasters are seen to be too dissimilar from one another, managers may not even consider adapting their past experiences to future risk events. In such cases, the MNC may not intend to learn from non-market risks because its current cognition is either to ignore or avoid risk rather than manage it as we saw in the earlier quote by Steve Culp. Due to firms' limited capability to learn, they select which information to retain (Huber, 1991; Levitt and March, 1988) and which information to unlearn or forget based on their past experience (Argote and Miron-Spektor, 2011; Huber, 1991). As a result, an MNC is more likely to categorize experience with non-market risks as unnecessary knowledge because the MNC may be skeptical that the experience will have value in the future. Thus, new knowledge about non-market risks lives only a short period of time within an organization before managers unlearn or forget it (de Holan and Phillips, 2004b; Eisenhardt and Martin, 2000).

When managers do recognize the importance of non-market risks and the value of experiential learning in foreign investment decisions, they will often attempt to recall their collective memory when faced with non-market risks in subsequent investments. If managers try to turn their distant experience into knowledge, their decision-making is apt to be negatively affected by retrospective errors or biases. This type of bias affects managers' ability to accurately recall their distant past experiences. Retrospective errors appear to occur systematically and may be attributable to faulty memory, among other factors (Golden, 1992). As a result, this could lead to an inaccurate reconstruction of past events and experiences. This explains the errors related to the managers' memories because they were unconsciously attempting to maintain their self-esteem about their past strategies and/or were inclined to remember past experience based on hindsight biases.

To sum up, in regard to non-market risks, MNCs are likely to forget their distant past experience and thus focus on recent past experience in FDI location decision. Thus:

Hypothesis 1.   Recent past firm experience with non-market risks, i.e., a) natural disasters and b) armed conflicts, will positively moderate the relationship between non-market risks and subsidiary-level investments, while distant past firm experience will not moderate the relationship.

2.3. Experience frequency and subsidiary investment decision

According to studies on organizational learning, routines facilitate more effective decision-making processes (Cyert and March, 1963). At the same time, routines can hinder firms' abilities to learn from new situations (Lampel and Shamsie, 2000; Obloj et al., 2013) when the new information is not consistent with their current knowledge stock (Cohen, 2007; Parmigiani and Howard-Grenville, 2011). Thus routines can help in situations characterized by more frequent and repeated experience driven mechanisms, but they can hinder firms' abilities to learn from new situations (Lampel and Shamsie, 2000; Obloj et al., 2013).

If the opportunities for gaining new experience are infrequent or rare, then managers may not see the value of learning from new situations. Experiences that are infrequent may be seen as anomalies. As such, managers may see little advantage in developing routines for events that may never occur. Moreover, if experience is rare or infrequent, there may be little reason to change existing routines or to establish new ones since there is insufficient information for developing a meaningful understanding of how to formulate appropriate responses.

When organizations are exposed to repeated situations and experiences, however, then it may be possible to glean valuable insights

from such experiences. Then new knowledge can replace the old ways of doing things. Thus, experiential learning is an important means of changing organizational routines (Feldman, 2003; Garud et al., 2011). For MNCs, accumulated experience in a host country affects firms' subsequent entry decisions or survival (Gao and Pan, 2010; Shaver et al., 1997). When managers of MNCs obtain new knowledge about unfamiliar host country environments, that knowledge can alter their sense of uncertainty or their assessment of country risk. In the same vein, we argue that firms change their FDI location decisions from avoidance to managing non-market risks when firms are more frequently exposed to such risks.

As discussed earlier, when faced with a non-market risk event such as a natural disaster or armed conflict, firms may not be sufficiently resilient or prepared. The result may be that huge costs are incurred for disaster response and recovery. In particular, even within the same type of natural disasters or armed conflicts, the severity, timing, location, and extent of damages caused can differ substantially across different events (e.g., Cavallo et al., 2013). Therefore, after an experience with a high impact non-market risk, firms may decide that avoidance is a better strategy. When firms face few non-market risks, managers may or may not learn from those experiences since the events may be too minimal to change the decision rules around managing these risks (i.e., avoid from the risks) (Cohen and Bacdayan, 1994; Sitkin, 1992). Also, the degree of knowledge gained through past experiences may not be sufficient to make managers feel confident about leveraging their learning in new and non-routine situations. In such cases, even if a manager has prior knowledge and experience, it may not change their decisions regarding avoiding risk in new investments.

However, as the frequency of experience with non-market risks increases, firms realize that neither divesting nor avoiding risk are the best strategies. With repeated experience with non-market risks, MNCs may gain experiential learning and critical information about non-market risks in various host countries (Becker et al., 2005; Bingham and Eisenhardt, 2011). Firms can accumulate knowledge from repeated experiences with non-market risks. As such, cumulated knowledge about the episodic non-market risks can lead firms to revise their current routines in FDI location decisions. In addition, managers may observe domestic firms and other MNCs operating successfully under the same levels of non-market risks (Dai et al., 2013). As managers observe others operating in the same situations, firms may realize that there is something to be learned from such experiences.

Experiential learning and information about non-market risks enable firms to recognize non-market risks as manageable situations (Feldman and Pentland, 2003; Lampel et al., 2009). Through their experiences then, managers can change their old mental models and develop new routines for managing risk. This, in turn, will increase knowledge about, and confidence in, managing non-market risks. Thus firms will use experience driven mechanisms and view non-market risks as manageable risks rather than unmanageable ones. In addition, experience and knowledge about managing non-market risks can become a new capability and a source of competitive advantage for a firm (Levinthal and March, 1993).

If firms develop a new routine for managing non-market risks, they are less likely to divest or delay their investments in high risk environments. Considering that MNCs' international supply chains and their networks are connected to one another, operational risks for one subsidiary can spread to other operations (Manuj and Mentzer, 2008a, 2008b). An unexpected divestment from one country can ruin headquarters' overall global strategy. Thus, divestment may significantly affect costs and performance of both the focal subsidiary and the entire MNC (Jüttner et al., 2003; Manuj and Mentzer, 2008). However, through experiential learning with non-market risks, the firm can effectively manage their supply chains, continue their global strategy, and reduce uncertainty from external environmental factors (Chopra and Sodhi, 2004; Manuj and Mentzer, 2008). Also, through experiential learning, firms can gain managerial knowledge about how to prepare for and recover from non-market risks (Sitkin, 1992); knowledge that can be an advantage vis-à-vis competitors. This, in turn, provides opportunities to enhance firms' competitiveness in the host country (Lu and Beamish, 2004). As a result, the MNC's competitiveness and performance increase in both host and global markets. Some firms may even take advantage of a new decision routine they obtained through experiential learning and use it to facilitate their investments in a host country with high levels of non-market risks.

Accumulated learning through frequent experience with non-market risks changes a firm's FDI location decision from risk avoidance to management. Frequent experience could be a source of knowledge that enables MNCs to overcome some of the negative aspects of non-market risks in foreign countries. Therefore, firms are not reluctant to invest in host countries with episodic non-market risks since they can take advantage of these complex situations using frequent experience.

Hypothesis 2.   Higher levels of frequency of experience with non-market risks, i.e., a) natural disasters and b) armed conflicts, will positively moderate the relationship between non-market risks and subsidiary-level investment, while lower levels of frequency of experience will not moderate the relationship.

2.4. High-intensity experience and subsidiary investment decision

It is well established that major changes in organizations and/or managerial decision making are more likely to occur from experience operating in turbulent environments than in stable ones (Lant et al., 1992). While firms can manage less severe non-market risks by modifying their processes and/or behaviors, they cannot manage highly severe non-market risks in the same way (Cunha et al., 2006). According to Fiol and Lyles (1985), when the impact of an event on the external environment is low, the external environment changes gradually so firms may experience the changes and make modifications in their behaviors (Mol and Birkinshaw, 2009). In such situations, the firms' experience driven mechanisms will not change much. Therefore, when facing difficulties caused by radical external environmental changes, firms may struggle to manage their situations since their strategies, core competencies, beliefs, values, and cultures may become less effective, or even entirely ineffective, in radically different environments (Akgün et al., 2007).

During and after a period of major non-market risk events, such as natural disasters or armed conflicts, an affected country may experience an economic downturn and a decline in consumption (Czinkota et al., 2010). In addition, the costs of doing business in a

host country with such non-market risks tend to increase because the subsidiary must bear increased security costs (Czinkota et al., 2010). Thus, performance declines during a radical environmental change and poor performance could be considered a failure (Côté et al., 1999).

Radical external environmental change, poor performance, and/or the possibility of organizational failure can lead a firm to reconsider its current processes (Greenwood and Hinings, 1996). Such events trigger changes in firms' strategies (Lant et al., 1992) because firms may notice that their current strategy does not match with what is necessary for the new environment. Moreover, prior to making changes in practices and strategies, managers will likely need to change their cognitive structure first. Otherwise, firms that experience past success will find it hard to adopt new behaviors in new environments (Miller, 1994). Such changes in managers' cognition and behaviors can be found after radical non-market events. According to Rachel Briggs and Charlie Edwards, security consultants and researchers, "9/11, like all security moments, was effective because it changed perceptions more than reality. Corporate security departments cannot manage security in a vacuum, detached from the perceptions of staff, the board and wider stakeholders (Briggs and Edwards, 2006, pp. 29–30)." In fact, 63% of companies said that 9/11 had strongly influenced changes in their corporate security (Briggs and Edwards, 2006).

Therefore, a radical external environmental change, which may threaten firm survival, triggers changes in firms' strategy in FDI location decisions. In addition, firms may develop internal capabilities, such as new routines and resources, that enable them to gain performance advantages through risk-taking behavior (Weick, 1979). Brännback and Wiklund (2001) argue that when a dramatic change occurs in business environments it causes direct changes in firms' decision-making and knowledge management. Changes in behaviors and modification of current strategies of the subsidiaries are not enough to manage the threats and opportunities in new environments because they are still connected with the previous routines and behaviors (March, 1981). As a result, firms need to change their response toward non-market risks in order to manage and overcome the risks. Thus, MNCs will revise their past routines to be consistent with the new environment rather than simply avoid a risky country or divest their investment in a host country. Thus, firms will not avoid the non-market risks but try to manage the risks when they have experience in severe risks.

Hypothesis 3. The experience with high-intensity non-market risks, i.e., a) natural disasters and b) armed conflicts, will positively moderate the relationship between non-market risks and subsidiary-level investment, while the experience in low-intensity risks will not moderate the relationship.

3. Data and model

3.1. Data and sample

The sample was drawn from 715 firms listed in the Fortune Global 500 during any year between 1999 and 2008. We were able to hand-collect 625 firms' subsidiary locations in 117 countries from their annual reports. We included only the firms' wholly owned subsidiaries because many firms did not report their ownership percentages in their partially-owned subsidiaries. We also focused on wholly owned subsidiaries because firms dedicated resources and capital to those wholly owned subsidiaries and thus these subsidiaries have significant exposure to locational risks.

After excluding the purely domestic firms and non-public firms, we merged the three data sets; the subsidiary location data, data on two types of non-market risks (natural disasters and armed conflicts), and a dataset of control variables. Regarding the number of observations, the theoretical number of observations could be as many as 443,430. However, the number of observations for the first-stage model is 433,037 because of missing firm-level information. The number of observations in the second-stage model, with control variables only, is 34,086. In the second stage model, we have 379 firms from 29 home countries and their location decisions in 117 countries. This is because we only consider host countries in which a firm has already established subsidiaries in order to investigate the firm's expansion or contraction in those host countries.

3.2. Measures and data sources

3.2.1. Dependent variable

For scholars interested in international investment, FDI by MNCs (generally measured as either the number of subsidiaries or investments in a foreign country, or the binary measure of MNC subsidiary-level entry or exit into a country), is a widely used measure for analyzing the effect of country context, investment risk, and their impact on MNCs (Arregle et al., 2009; Buckley et al., 2020; Holburn and Zelner, 2010; Perkins, 2014). Thus the international strategic management literature has heavily depended on this type of measure in analyzing the impact of country-level characteristics, including risks. Thus to measure MNC investments in a host country at the subsidiary-level we use the number of wholly owned subsidiaries hand-collected from annual reports of each firm. This is also because the establishment of a wholly owned subsidiary brings substantial responsibility, commitment, and higher risks to MNCs' headquarters (Anderson and Coughlan, 1987; Hill et al., 1990).

3.2.2. Independent variables

We used four sets of independent variables in our study: types and incidents of non-market events, recent past (vs. distant past) experience in each type of event (H1), experience frequency in each type of event (H2), and experience with high-intensity and low-intensity events (H3). We divided the non-market risks into natural disaster risks (measured by aggregated natural disasters) and human-made risks (measured by armed conflicts). As discussed earlier, while natural disasters and armed conflicts are similar, they

have some notable differences. To consider how such differences might affect experiential learning in FDI location decisions, we separated these two types of non-market risks in our analysis.

Natural disasters are defined as the results of a natural hazard such as a flood, earthquake, storm, drought, epidemic, landslide, extreme temperature, volcanic activity, wildfire, and insect infestation.[1] The natural disaster data is from the Emergency Events Database (EM-DAT) (Guha-Sapir et al., 2015). According to the data, the incidents of natural disasters were approximately 430 per year between 1999 and 2008. The number of countries affected by natural disasters was around 117 countries per year during the period. The data do not show increasing or decreasing trends in the incidents or number of affected countries for natural disasters. The number of incidents varies from 370 incidents in 2003 to 545 incidents in 2000. The most affected country during the sample period was China, followed by the U.S., India, Indonesia, and the Philippines. In terms of the number of countries experiencing disasters, there were 123 countries affected by natural disasters in 1999 and 98 countries affected in 2008.

Armed conflicts are defined as contested incompatibilities that concern governments and/or territories where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths in a year. The armed conflict data is from Uppsala University's Conflict Data Program. According to the data, the incidents of armed conflicts were around 35 incidents per year in 1999–2008. The number of countries affected by armed conflicts was around 27 countries per year during the study period. The data do not show increasing or decreasing trends in the incidents or number of affected countries for armed conflicts. The number of incidents varies from 32 incidents in 2002, 2003, and 2005, to 39 incidents in 1999 and 2000. The most affected country during the sample period was India, followed by Myanmar, the Philippines, Ethiopia, and Russia. Among the 31 countries affected by armed conflicts in 1999, only 18 countries experienced armed conflicts in 2008. These figures suggest that armed conflicts do not necessarily occur in the same countries, and thus the occurrence of armed conflicts is not as predictable as some have argued.

The second variable is MNC's recent experience with each type of non-market risk. We operationalized recent past experience (vs. distant past experience) by counting the number of MNC subsidiaries in a host country that were affected by each type of non-market risk in each previous year (e.g., a year before the investment, two years before the investment, three years before the investment, etc.). The count variable measures the context-specific experience by considering the intensity of host country activities (Perkins, 2014).

The third variable is MNC's experience frequency. We computed the minimum number of non-market risks that were experienced by an MNC in a host country in each of the past five years (i.e., $X = \min$[experience in t-1, experience in t-2, experience in t-3, experience in t-4, experience in t-5]). This measure indicates that the MNC experienced at least X times a given type of non-market event in each of the past five years. To check the stability of the results, we also computed the experience frequency in the past three years and past two years.

The last variable is MNC's experience with high-intensity and low-intensity events. For natural disasters, we used the mean value of number of killed to identify the country-year that has high-intensity or low-intensity natural disasters. For armed conflicts, the data provide whether a conflict was a high intensity one or not (>1000 battle-related deaths in a given year). To measure experience with high-intensity events and with low-intensity events, we counted the number of subsidiaries belonging to an MNC in a host country that experienced high-intensity and low-intensity events.

3.2.3. Control variables

We used firm-level, home country-level, host country-level and home-host country pair-level control variables known to influence MNCs' entry, expansion, or survival (e.g., Delios and Beamish, 2001; Delios and Henisz, 2003; Holburn and Zelner, 2010). These sets of control variables likely minimized alternative explanations that other factors, particularly firm-specific ones, that might affect investment outcomes.

At the firm-level, we included firm tangible assets (log), annual sales growth (%), R&D capability (R&D expenditure divided by sales), marketing capability (selling, general and administrative expenditures divided by sales), reputation (goodwill value divided by sales), financial capability (current assets divided by current liabilities), managerial capability (Tobin's q), and geographic diversification (measured using an entropy measure based on the number of subsidiaries in six geographic regions [i.e., Africa, the Middle East, Asia-Pacific, Europe, North America, and South America]).

At the home country-level, we included uncertainty avoidance, political constraints (measured using the POLCON index to capture the stability of policy changes); and government stability (measured using the government stability index of International Country Risk Guide [ICRG] to capture the government's ability to carry out its declared policies) since researchers have noted that home country institutional environments affect MNCs' international strategies (Witt and Lewin, 2007). These variables were collected from Hofstede (2001), the POLCON dataset provided by Witold Henisz, and ICRG by the PRS Group.

At the host country-level, we included annual GDP growth (%); population (log); land size (log of squared kilometers); imports (%, imports divided by GDP); inward FDI (%, FDI inflows divided by GDP); political constraints; and government stability. These variables represent country-level factor endowments, and government policies regarding foreign businesses. These variables were collected from the World Development Indicators database produced by the World Bank, the POLCON dataset, and ICRG.

At the home-host country pair-level, we controlled for geographic distance (log of the distance between the geographic centers of two countries) and a set of dummy variables: sharing common borders; sharing common language; colonial relationship; regional trade agreements; and currency unions. These home-host country pair variables represent geographic, cultural, and institutional distances

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[1] Natural disasters must meet one of four criteria: 1) ten or more people reported killed, 2) one hundred or more people reported affected, 3) declaration of a state of emergency, or 4) a call for international assistance.

between home and host countries. All control variables in the study are conventional measures used in the literature.

3.3. Model

To test our hypotheses, we used a negative binomial regression model. We chose a negative binomial regression model over a Poisson regression model because our data show symptoms of overdispersion: the standard deviation of our dependent variable (8.483) is greater than the mean value (3.564). A negative binomial regression model is a generalized form of Poisson regression model (Lawless, 1987).

The probability of expanding in the country is a function of a set of firm, country, and home-host country pair characteristics discussed above. In our model, self-selection issues may pose a limitation since firms present in a host country likely have greater international experience and more extensive resources that may affect subsequent MNC investment decisions under high non-market risks. For these reasons, we implemented Heckman's selection model (Heckman, 1979) in the negative binomial regression models.[2] In addition to the control variables discussed above, in the second stage regression model we included year, host country, and three digit NAICS industry fixed effects to control for unobserved heterogeneity. It is possible that levels of avoidance against non-market risks vary by host country and industry characteristics and change over time. We used robust, heteroskedasticity, and autocorrelation consistent standard errors by the Huber-White estimator with clustering by MNC and host country. To reduce the potential for endogeneity problems, we used one-year lagged independent and control variables.

To test our moderating effect hypotheses, we included interaction terms between each type of non-market event and each of the three types of experience variables (recent experience, experience frequency, and experience in high/low-intensity risk). For the interaction terms, we mean-centered each independent variable to increase the interpretability of the regression coefficients as well as reduce multicollinearity between the main effect and interaction effect variables. Fig. 3 summarizes and illustrates our model.

Summary statistics and a correlation matrix appear in Table 1. We note that none of the correlations are particularly high. The highest correlation is 0.682 for experience in armed conflicts and experience in high intensity armed conflicts. These two variables do not enter a model together. The model variance inflation factors (VIFs) are between 1.84 and 2.30 and the highest individual VIFs are between 4.89 and 7.39. Thus we did not find any indication of high collinearity.

4. Results

4.1. Hypothesis 1: recent experience and FDI decision

Table 2 shows the results for testing Hypothesis 1. To find the effect of past experience on MNC expansion, we need to examine the optimal lagged effect of the experience variable. However, the literature does not provide a definitive guideline for determining the optimal number of lagged effects in a panel data analysis. Such guidelines exist for time series analysis, but the suggestions and methodologies in time series analysis cannot be applied to a panel data analysis like ours. Therefore, we need to have reasonable frameworks and assumptions to decide the optimal number of lagged effects. First, we stepwise added each additional lag of experience and its interaction with non-market risks together because we are interested in how experience moderates the effect of non-market risks on MNC investments. Second, if the coefficient of an existing lag lost statistical significance when we added a new lag (representing an earlier time period), then we assumed that the new lag should not be considered. This is because it is theoretically hard to assume that managers systematically do not consider recent past risk or experience but do systematically consider distant past risk or experience. Third, the optimal number of lagged effects may vary by the type of non-market risks and experience.

Turning to our results, first we only included the control variables in our model (see the first column of Table 2). The results show that at the firm-level, high-levels of firm tangible assets, marketing capability, reputation, financial capability and geographic diversification increase the likelihood of expansion in a host country. At the home-country level, MNCs are likely to expand in a host country when they originate from a country with low uncertainty avoidance and high stability in policy changes and governments. At the host-country level, MNCs likely expand in a host country relying on imports and inward FDI, presumably because the host country provides favorable economic policies to MNCs. In addition, common language and regional trade agreements enable MNCs to expand in a host country, while geographic distance discourages the expansion. In the second column, we included both natural disaster incidents and armed conflict incidents to verify the effects of non-market events on MNC expansion. Armed conflicts ($\beta = -0.1098$, $p < 0.001$) significantly reduce the likelihood of expansion in a host country, while natural disasters ($\beta = -0.0042$, $p < 0.10$) weakly reduce the likelihood.

Second, in regard to experience with natural disasters, Column 3 provides the results from the optimal lag model. It shows that firms utilize up to three years of past experience with natural disasters when making their expansion decision in a host country. Overall experience itself (i.e., direct effects of experience in natural disasters) encourages managers to expand in a host country. However, only recent past experience (experience in t-1) helps them to manage the actual risks ($\beta = 0.0011$, $p < 0.001$ for experience in t-1). Remote past experience leads them to avoid the actual risks ($\beta = -0.0013$, $p < 0.001$ for experience in t-2; $\beta = -0.0005$, $p < 0.01$ for experience in t-3). In Column 4, we added an additional lagged experience variable (i.e., experience in t-4) and its interaction with natural

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Table 1
Summary statistics and correlation matrix[a].

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Number of subsidiaries															
2. Natural disaster (NATD) incidents	0.096														
3. Armed conflict (ARMC) incidents	−0.012	0.420													
4. Experience in NATD	0.435	0.138	0.001												
5. Experience in ARMC	0.340	0.281	0.466	0.332											
6. NATD experience frequency in 5 years	0.142	0.343	0.217	0.194	0.278										
7. ARMC experience frequency in 5 years	−0.005	0.356	0.388	0.014	0.551	0.277									
8. High intensity NATD incidents	0.016	0.568	0.459	0.032	0.196	0.482	0.379								
9. Low intensity NATD incidents	0.035	−0.062	−0.170	0.058	−0.070	−0.071	−0.124	−0.437							
10. Experience in high intensity NATD	0.247	0.304	0.112	0.267	0.179	0.432	0.157	0.249	−0.078						
11. Experience in low intensity NATD	0.319	0.064	−0.030	0.474	0.311	0.065	−0.034	−0.041	0.092	−0.051					
12. High intensity ARMC incidents	0.018	0.260	0.502	0.037	0.222	0.059	0.337	0.159	0.008	0.025	0.039				
13. Low intensity ARMC incidents	0.001	0.404	0.446	0.019	0.259	0.340	0.452	0.263	−0.042	0.070	0.005	−0.065			
14. Experience in high intensity ARMC	0.323	0.075	0.113	0.348	0.682	0.037	0.122	0.018	−0.023	0.013	0.385	0.052	0.072		
15. Experience in low intensity ARMC	0.195	0.260	0.157	0.220	0.489	0.340	0.189	0.088	0.007	0.161	0.190	0.073	0.345	−0.009	
16. Firm tangible assets (log)	0.034	−0.048	−0.021	0.016	0.002	−0.043	−0.012	−0.035	−0.002	−0.019	0.018	−0.016	−0.003	0.006	0.007
17. Annual sales growth	−0.004	0.004	−0.001	−0.002	−0.004	0.016	−0.003	−0.002	0.003	−0.002	0.000	0.005	0.001	0.000	0.000
18. R&D capability	−0.038	−0.008	0.014	−0.030	−0.011	0.016	0.035	0.013	−0.010	−0.007	−0.029	−0.003	0.013	−0.008	−0.018
19. Marketing capability	0.005	−0.042	0.007	0.007	0.004	−0.023	0.021	−0.004	0.001	0.008	0.003	0.010	−0.001	−0.003	−0.020
20. Reputation	0.039	−0.053	−0.018	0.027	0.002	−0.060	−0.013	−0.030	−0.008	−0.001	0.024	−0.027	−0.001	0.002	−0.004
21. Financial capability	−0.005	−0.004	0.001	−0.007	−0.004	0.000	0.006	−0.003	−0.009	−0.002	−0.006	−0.004	0.001	−0.003	−0.006
22. Managerial capability	0.017	−0.021	−0.028	0.018	−0.009	−0.020	−0.032	−0.032	0.004	−0.014	0.019	−0.004	0.003	0.002	−0.004
23. Geographic diversification	−0.001	−0.079	0.011	0.007	0.009	−0.032	0.042	−0.013	0.001	0.001	0.007	−0.017	−0.005	−0.002	−0.017
24. Home country uncertainty avoidance	−0.010	0.090	0.015	−0.004	0.018	0.095	0.021	0.041	0.023	0.022	−0.006	0.010	0.047	0.006	0.051
25. Home country political constraints	−0.008	0.093	0.022	0.003	0.024	0.126	0.023	0.047	0.006	0.023	−0.003	0.034	0.038	0.019	0.045
26. Home country government stability	−0.009	0.011	0.002	0.000	−0.003	0.012	−0.012	0.022	0.014	−0.013	0.005	0.103	−0.054	0.023	−0.046
27. Annual GDP growth (Host country)	−0.043	0.210	0.177	−0.044	0.050	0.160	0.168	0.197	−0.161	0.137	−0.091	0.022	0.112	−0.005	−0.011
28. Population (log) (Host country)	0.123	0.306	0.419	0.169	0.236	0.345	0.340	0.470	0.171	0.252	0.110	0.244	0.316	0.072	0.166
29. Land size (log) (Host country)	0.071	0.257	0.229	0.128	0.146	0.465	0.185	0.246	0.245	0.147	0.095	0.158	0.253	0.047	0.151
30. Import (% of GDP) (Host country)	−0.048	−0.296	−0.156	−0.104	−0.099	−0.220	−0.119	−0.131	−0.234	−0.063	−0.087	−0.127	−0.163	−0.041	−0.085
31. Inward FDI (% of GDP) (Host country)	−0.007	−0.110	−0.047	−0.047	−0.027	−0.086	−0.043	−0.057	−0.143	−0.028	−0.038	−0.032	−0.055	−0.011	−0.025
32. Political constraints (Host country)	−0.004	−0.255	−0.076	−0.009	−0.024	−0.270	−0.107	−0.214	0.121	−0.132	0.034	−0.034	−0.056	−0.004	0.000
33. Government stability (Host country)	0.041	0.099	−0.085	0.016	−0.029	0.119	−0.116	0.048	−0.099	0.043	0.009	0.030	−0.060	0.026	−0.045
34. Geographic distance	−0.031	0.163	0.130	−0.008	0.062	0.120	0.111	0.063	0.049	0.009	−0.006	0.062	0.119	0.008	0.040
35. Sharing common border	0.055	−0.019	−0.059	0.051	−0.017	0.002	−0.041	−0.017	0.028	0.015	0.056	−0.036	−0.053	−0.005	0.004
36. Sharing common language	0.106	0.032	0.208	0.080	0.135	0.004	0.188	0.038	−0.104	−0.011	0.069	0.105	0.122	0.053	0.038
37. Colonial relationship	0.139	0.051	0.072	0.127	0.069	0.033	0.064	−0.006	0.036	−0.025	0.127	0.066	0.112	0.063	0.027
38. Regional trade agreements	0.036	−0.122	−0.085	0.021	−0.036	−0.087	−0.067	−0.068	−0.021	−0.020	0.025	−0.055	−0.065	−0.009	−0.016
39. Currency union	0.005	−0.110	−0.073	−0.002	−0.043	−0.084	−0.056	−0.034	−0.009	−0.007	0.003	−0.051	−0.087	−0.017	−0.037
Mean	3.564	4.849	0.272	2.793	0.797	1.920	0.155	0.116	0.592	0.440	2.101	0.036	0.100	0.189	0.302
Std. Dev.	8.483	7.038	0.972	7.977	4.913	4.508	0.709	0.321	0.491	2.537	7.176	0.187	0.300	2.944	2.144

	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
17	0.024																		
18	−0.003	−0.025																	
19	0.067	−0.018	0.113																
20	0.224	−0.025	−0.025	0.146															
21	−0.062	−0.002	0.008	−0.006	−0.040														
22	0.285	0.068	−0.163	0.060	0.265	−0.113													
23	−0.086	−0.004	0.250	0.306	0.037	0.032	−0.168												
24	−0.042	−0.029	−0.113	−0.173	−0.065	−0.029	0.089	−0.260											
25	−0.077	0.054	−0.052	−0.203	−0.138	−0.033	0.051	−0.173	0.537										
26	−0.092	0.019	0.023	0.115	−0.086	−0.013	0.020	0.028	−0.085	0.001									
27	0.034	−0.014	−0.001	0.010	0.048	0.004	−0.008	0.071	0.006	−0.026	−0.245								
28	−0.052	−0.010	0.006	−0.032	−0.057	−0.004	−0.050	−0.059	0.086	0.073	−0.013	0.114							
29	−0.027	−0.005	0.008	−0.017	−0.035	−0.007	−0.027	−0.016	0.047	0.040	−0.002	0.070	0.765						
30	0.011	−0.006	−0.019	−0.016	0.014	0.014	0.002	−0.020	−0.002	−0.001	−0.059	0.100	−0.503	−0.755					
31	0.029	0.004	−0.031	−0.019	0.003	0.003	0.025	−0.055	−0.012	−0.003	0.008	−0.002	−0.324	−0.310	0.373				
32	0.007	0.003	0.017	−0.003	0.003	0.001	0.006	−0.040	−0.017	−0.021	0.082	−0.268	−0.246	−0.086	−0.065	0.116			
33	−0.020	0.011	−0.009	0.013	−0.062	−0.001	0.004	−0.038	−0.004	0.026	0.224	0.114	−0.057	−0.054	0.208	0.150	−0.136		
34	−0.061	−0.022	0.062	0.154	−0.065	0.027	−0.154	0.287	−0.115	−0.166	0.041	0.124	0.166	0.198	−0.058	−0.108	−0.191	0.053	
35	0.036	−0.004	−0.045	−0.061	0.014	−0.012	0.050	−0.151	0.076	0.050	−0.009	−0.113	0.019	−0.001	0.005	0.044	0.077	−0.023	−0.518
36	0.088	−0.010	−0.019	0.037	0.035	0.016	0.026	−0.034	−0.137	−0.167	0.024	0.027	−0.066	−0.117	0.113	0.009	−0.037	0.092	0.070
37	0.063	−0.011	−0.040	−0.038	0.069	−0.005	0.081	−0.082	−0.088	−0.112	0.001	−0.027	0.079	0.026	−0.046	−0.039	−0.010	0.024	0.047
38	0.046	0.005	−0.060	−0.127	0.073	−0.016	0.108	−0.231	0.058	0.102	−0.056	−0.137	−0.088	−0.124	0.057	0.084	0.156	−0.101	−0.654
39	0.048	0.020	−0.045	−0.052	0.032	−0.012	0.074	−0.118	0.179	0.106	−0.026	−0.060	−0.169	−0.166	0.061	0.105	0.080	0.019	−0.402
Mean	10.408	2.641	0.032	0.009	0.166	12.337	0.463	1.077	3.978	0.444	8.901	4.335	17.010	12.630	45.052	11.764	0.364	8.688	8.063
Std. Dev.	1.361	31.484	0.054	0.022	0.244	129.833	0.234	0.337	0.319	0.081	1.504	3.202	1.704	2.215	35.548	57.163	0.175	1.518	0.940

	35	36	37	38	39
36	0.119				
37	−0.005	0.498			
38	0.457	−0.037	−0.057		
39	0.264	−0.003	−0.062	0.451	
Mean	0.058	0.192	0.073	0.140	0.064
Std. Dev.	0.235	0.394	0.261	0.347	0.245

Note: [a] Correlations above |0.0095| are significant at $p < 0.05$; Correlations above |0.0125| are significant at $p < 0.01$.
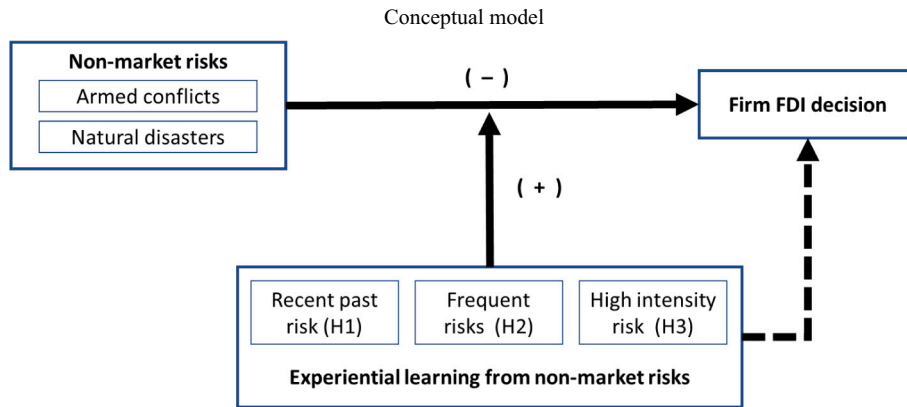
Conceptual model

Fig. 3. Conceptual model.

disasters. The inclusion of additional experience and interaction variables make the experience in t-4 ($\beta = -0.0007$, $p =$ n.s.) and the interaction term in t-3 insignificant ($\beta = -0.0001$, $p =$ n.s.). Thus including an additional lagged experience variable in the model did not provide any experience benefits and it also violated the assumption we established at the beginning of this section.

Third, in regard to armed conflicts, Column 5 shows the results from the optimal lag model. It shows that only recent past experience is important by itself ($\beta = 0.0409$, $p < 0.001$ for direct effect) and for managing the new risks of armed conflicts ($\beta = 0.0070$, $p < 0.001$ for interaction effect). In Column 6, we added additional lagged experience (i.e., experience in t-2) and its interaction with armed conflicts. While the direct effect of experience is significant ($\beta = 0.0140$, $p < 0.001$), the interaction effect is insignificant ($\beta = -0.0018$, $p =$ n.s). Thus the results support the idea that only recent country-specific experience can change an MNC's avoidance strategy against non-market events in FDI decisions, supporting Hypothesis 1. In the Discussion and conclusion section, we will elaborate on the differences between natural disasters and armed conflicts.

4.2. Hypothesis 2: experience frequency and FDI decision

Table 3 shows the results for testing Hypothesis 2. In Column 1, using the frequency of natural disaster experience over a five-year period, results show that experience frequency with natural disasters has a positive and significant interaction effect with natural disasters ($\beta = 0.0012$, $p < 0.001$). In Columns 2 and 3, we used the frequency of experience with natural disasters over three-year (Column 2) and two-year (Column 3) periods; the results are very consistent. In Column 4, we used the frequency of armed conflict experience over a five-year period, and the results show that experience frequency with armed conflicts has a positive and significant interaction effect with armed conflicts ($\beta = 0.0327$, $p < 0.001$). In Columns 5 and 6, we used the frequency of experience in armed conflicts over three-year (Column 2) and two-year (Column 3) periods. The results are consistent. Thus the results fully support Hypothesis 2 for both natural disasters and armed conflicts.

4.3. Hypothesis 3: high-impact experience and FDI decision

Table 4 shows the results for testing Hypothesis 3. In Column 1, we included high- and low-intensity incidents as well as experience in high- and low-intensity incidents for both natural disasters and armed conflicts. It shows that for armed conflicts both high- and low-intensity incidents in a country have negative effects on MNC expansion in the country, while for natural disasters both high- and low-intensity incidents are insignificant.

In Column 2, two types of experience with natural disasters are added and both experience in high-intensity ($\beta = 0.0857$, $p < 0.001$) and low-intensity ($\beta = 0.0669$, $p = 0.001$) natural disasters are significant and positive. In Column 3, we added interactions of experience in high-intensity natural disasters with high- and low-intensity natural disaster incidents. The results show that high-intensity experience has a positive moderating effect with both high-intensity ($\beta = 0.0419$, $p < 0.001$) and low-intensity ($\beta = 0.0089$, $p < 0.001$) natural disasters on MNC expansion. In Column 4, we added interactions of low-intensity experience with high- and low-intensity natural disaster incidents. The results show that low-intensity experience cannot positively moderate the effects of both high-intensity ($\beta = -0.0044$, $p =$ n.s.) and low-intensity ($\beta = -0.0199$, $p < 0.05$) natural disasters on MNC expansion.

In Column 5, two types of experience in armed conflicts are added and both experience with high-intensity ($\beta = 0.0362$, $p < 0.001$) and low-intensity ($\beta = 0.0642$, $p = 0.001$) armed conflicts are significant and positive. In Column 6, we added interactions of high-intensity experience with high- and low-intensity armed conflicts. The results show that high-intensity experience has positive moderating effects with both high-intensity ($\beta = 0.0737$, $p < 0.001$) and low-intensity ($\beta = 0.0490$, $p < 0.001$) armed conflicts on MNC expansion. In Column 7, we added interactions of low-intensity experience with high- and low-intensity natural disasters. The results show that low-intensity experience negatively moderates the effects of both high-intensity ($\beta = -0.0691$, $p < 0.01$) and low-intensity ($\beta = -0.0476$, $p < 0.1$) armed conflicts on expansion.

Overall, the results show that experience with high-intensity non-market events enables MNCs to manage these risks, but

Table 2

Recent experience and FDI decision[a].

Type of Non−market events			Natural disasters		Armed Conflicts	
Model	Control only (1)	Events (2)	Optimal lag (3)	Additional lag (4)	Optimal lag (5)	Additional lag (6)
Natural disaster incidents		−0.0042[†]	−0.0018	−0.0098***	−0.0041[†]	−0.0007
(NATD)		(0.0022)	(0.0023)	(0.0026)	(0.0022)	(0.0024)
Armed conflict incidents		−0.1098***	−0.0390	−0.1422***	−0.3843***	−0.2768***
(ARMC)		(0.0269)	(0.0324)	(0.0350)	(0.0296)	(0.0344)
Experience in NATD (t−1)			0.0507***	0.0497***		
			(0.0013)	(0.0015)		
Experience in NATD (t−1)			0.0011***	0.0013***		
X NATD incidents			(0.0002)	(0.0002)		
Experience in NATD (t−2)			0.0285***	0.0325***		
			(0.0014)	(0.0015)		
Experience in NATD (t−2)			−0.0013***	−0.0014***		
X NATD incidents			(0.0002)	(0.0003)		
Experience in NATD (t−3)			0.0171***	0.0159***		
			(0.0013)	(0.0016)		
Experience in NATD (t−3)			−0.0005**	−0.0001		
X NATD incidents			(0.0002)	(0.0002)		
Experience in NATD (t−4)				−0.0007		
				(0.0014)		
Experience in NATD (t−4)				−0.0008***		
X NATD incidents				(0.0002)		
Experience in ARMC (t−1)					0.0409***	0.0361***
					(0.0017)	(0.0021)
Experience in ARMC (t−1)					0.0070***	0.0079***
X ARMC incidents					(0.0008)	(0.0011)
Experience in ARMC (t−2)					0.0140***	
					(0.0016)	
Experience in ARMC (t−2)						−0.0018
X ARMC incidents						(0.0012)
Firm tangible assets (log)	0.0282***	0.0372***	0.0222***	0.0435***	0.0315***	0.0364***
	(0.0058)	(0.0059)	(0.0067)	(0.0077)	(0.0058)	(0.0064)
Annual sales growth	0.0000	0.0002	−0.0000	−0.0007	0.0002	−0.0006
	(0.0002)	(0.0002)	(0.0011)	(0.0011)	(0.0002)	(0.0013)
R&D capability	−1.8730***	−1.8231***	−1.0021***	−0.4322**	−1.7746***	−1.7168***
	(0.1433)	(0.1461)	(0.1450)	(0.1586)	(0.1444)	(0.1500)
Marketing capability	2.0397***	2.0987***	1.4101***	3.0958***	2.0309***	2.1954***
	(0.2993)	(0.3103)	(0.3227)	(0.3577)	(0.3062)	(0.3184)
Reputation	0.2339***	0.2234***	0.1608***	0.2846***	0.2038***	0.2651***
	(0.0289)	(0.0293)	(0.0329)	(0.0365)	(0.0289)	(0.0333)
Financial capability	0.0002***	0.0004***	0.0004***	0.0003***	0.0004***	0.0005***
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Managerial capability	0.0115	0.0121	−0.0649*	−0.1851***	0.0374	−0.0041
	(0.0271)	(0.0274)	(0.0285)	(0.0321)	(0.0271)	(0.0293)
Geographic diversification	0.8002***	0.8936***	0.2758***	1.1340***	0.7970***	0.8175***
	(0.0518)	(0.0549)	(0.0641)	(0.0770)	(0.0543)	(0.0603)
Uncertainty avoidance	−0.1038***	−0.0943***	−0.0023	0.1420***	−0.1057***	−0.0910***
(Home country)	(0.0232)	(0.0234)	(0.0260)	(0.0295)	(0.0231)	(0.0254)
Political constraints	0.3898***	0.4457***	0.1507	0.5137***	0.4358***	0.4171***
(Home country)	(0.0843)	(0.0858)	(0.0946)	(0.1093)	(0.0849)	(0.0923)
Government stability	0.0146*	0.0171**	0.0182**	0.0403***	0.0190**	0.0245***
(Home country)	(0.0061)	(0.0062)	(0.0065)	(0.0073)	(0.0061)	(0.0066)
Annual GDP growth	−0.0014	−0.0037	−0.0046	−0.0163***	−0.0040	−0.0038
(Host country)	(0.0027)	(0.0029)	(0.0034)	(0.0047)	(0.0028)	(0.0031)
Population (log)	−0.1266	−0.0213	1.3558***	4.7389***	0.0403	0.1511
(Host country)	(0.2952)	(0.3194)	(0.3969)	(0.4914)	(0.3159)	(0.3493)
Land size (log)	−1.8667	−2.0338	−1.0648	−10.5696***	−1.5431	−2.6689
(Host country)	(2.7134)	(2.8709)	(5.3042)	(0.6004)	(2.8288)	(3.3452)
Import (% of GDP)	0.0020[†]	0.0013	0.0030*	0.0085***	0.0011	0.0018
(Host country)	(0.0011)	(0.0012)	(0.0012)	(0.0014)	(0.0012)	(0.0012)
Inward FDI (% of GDP)	0.0004[†]	0.0005*	0.0009	−0.0019[†]	0.0004*	0.0003
(Host country)	(0.0002)	(0.0002)	(0.0005)	(0.0010)	(0.0002)	(0.0003)
Political constraints	−0.0616	−0.0285	0.1045	0.0627	0.0216	0.0836
(Host country)	(0.0606)	(0.0639)	(0.0756)	(0.0913)	(0.0633)	(0.0687)
Government stability	0.0050	0.0062	0.0047	0.0364***	0.0105[†]	0.0129*
(Host country)	(0.0060)	(0.0061)	(0.0068)	(0.0078)	(0.0061)	(0.0065)
Geographic distance	−0.1351***	−0.1450***	−0.0604***	−0.1559***	−0.1319[†]	−0.1355[†]
	(0.0122)	(0.0124)	(0.0135)	(0.0156)	(0.0122)	(0.0135)

(continued on next page)

Table 2 (*continued*)

Type of Non−market events			Natural disasters		Armed Conflicts	
Model	Control only (1)	Events (2)	Optimal lag (3)	Additional lag (4)	Optimal lag (5)	Additional lag (6)
Sharing common border	0.0034	0.0119	−0.0055	0.0566	−0.0041	−0.0153
	(0.0303)	(0.0305)	(0.0315)	(0.0355)	(0.0301)	(0.0325)
Sharing common language	0.3567***	0.3749***	0.1731***	0.3538***	0.3442***	0.3519***
	(0.0239)	(0.0243)	(0.0258)	(0.0296)	(0.0241)	(0.0263)
Colonial relationship	0.0133	0.0189	−0.1375***	−0.0975**	0.0417	0.0377
	(0.0282)	(0.0284)	(0.0292)	(0.0326)	(0.0280)	(0.0301)
Regional trade agreements	0.0706**	0.0716**	−0.0306	−0.0027	0.0546*	0.0540*
	(0.0256)	(0.0258)	(0.0269)	(0.0302)	(0.0255)	(0.0275)
Currency unions	0.0493	0.0668*	−0.0335	0.1238**	0.0855**	0.0756*
	(0.0311)	(0.0316)	(0.0335)	(0.0381)	(0.0312)	(0.0336)
Self−selection parameter	0.1449***	0.2358***	−0.0199	0.7472***	0.1962***	0.1848***
	(0.0420)	(0.0449)	(0.0537)	(0.0653)	(0.0445)	(0.0495)
Over−expansion parameter	−0.7428***	−0.7442***	−1.4623***	−1.5300***	−0.7908***	−0.8318***
	(0.0111)	(0.0113)	(0.0172)	(0.0202)	(0.0115)	(0.0125)
Number of observations	34,086	32,766	22,664	18,278	32,766	28,597
AIC	145,780	140,194	86,205	69,128	139,095	120,735

Note: [a] Non−standardized coefficients are reported, and standard errors are in parentheses. Two−tailed test. A probit regression model estimates the first−stage model, but not report here. All models are estimated using negative binomial regression. Robust, heteroskedasticity and autocorrelation −consistent standard errors clustered by MNC and host country are used, but not reported. Constant, industry−, country− and year−fixed effects are estimated but not reported here.

[†] $p < 0.10$.
[*] $p < 0.05$.
[**] $p < 0.01$.
[***] $p < 0.001$

experience with low-intensity non-market events deters MNCs from non-market risks. Thus Hypothesis 3 is fully supported for both natural disasters and armed conflicts.

5. Discussion and conclusion

Experiential learning has been known as a key mechanism that lower risks in international expansion and location choice (Delios and Beamish, 2001; Jain et al., 2016; Kogut and Zander, 1993; Martin and Salomon, 2003; Putzhammer et al., 2020). The same mechanism has been applied to non-market risks in foreign countries (Delios and Henisz, 2000, 2003; Oh and Oetzel, 2017; Perkins, 2014). The objective of this study was to explain the experience driven mechanisms that affect MNCs' responses to global risk phenomena – natural disasters and armed conflicts. We examined whether and how past experience with such non-market risks changes how MNCs' respond to risk in subsequent FDI location decisions. This approach provides a more nuanced understanding of and boundary conditions to experiential learning. It also provides new implications to the non-market literature in international management. Our findings suggest that experience does matter in interesting ways and can change firms' responses toward risks. Specifically, MNC experience with recent, frequent, and high-intensity non-market risk events can change a firm's FDI location decision. A key implication of our findings is that firms can learn to manage during seemingly unmanageable risks; even major exogenous episodic non-market risks like natural disasters and armed conflicts.

Our results show that learning takes place for two distinct types of non-market risks suggesting that learning about risk is not idiosyncratic to one type of major risk. Moreover, for both natural disasters and armed conflicts, while recent past experience appears to provide positive learning advantages for managing these risks, distant past experiences actually lead managers to avoid these risks in subsequent investment decisions. One implication is that managers with recent experience in a host country with significant risk should be included in decision-making when an MNC is considering whether or not to expand in the country.

We did find, however, that the longevity of experience matters and is not the same for natural disasters and armed conflicts. Our results show that the experiential benefits associated with experience last longer for natural disasters (up to three years) in a host country than for armed conflicts (one year). We presume that unlike natural disasters, armed conflicts may result in changes to a political regime or to the institutional environment in a country. Firms may be able to prepare for and respond to armed conflicts given their experience, but their experience loses relevance as conditions on the ground change. Conflicts often lead to changes in political regimes, power dynamics and perhaps policies and regulations. Once these types of changes occur, the value of past experience may diminish. Thus complexity arising from human factors reduces the longevity of experiential benefits. However, we also found that for both natural disasters and armed conflicts, only very recent experience can reduce the negative effect of these events on firm expansion in the host country. It may explain why not all MNCs have prepared for a pandemic such as COVID-19, despite the fact that many experienced similar types of diseases such as SARS in 2002–2004, swine influenza (H1N1 pandemic) in 2009, and Ebola virus disease in 2013–2016.

In addition, we also found that the greater the frequency of the subsidiary's experience with major non-market risk events, the more

Table 3
Experience frequency and FDI decision[a].

Type of Non−market events	Natural disasters			Armed Conflicts		
Model	5 years (1)	3 years (2)	2 year (3)	5 years (4)	3 years (5)	2 year (6)
Natural disaster (NATD) incidents	0.0100**	−0.0014	−0.0075**	0.0038	0.0009	−0.0018
	(0.0038)	(0.0030)	(0.0028)	(0.0033)	(0.0026)	(0.0024)
Armed conflict (ARMC) incidents	0.0233	−0.0147	−0.0747*	0.0321	−0.0017	−0.0737*
	(0.0458)	(0.0368)	(0.0319)	(0.0465)	(0.0381)	(0.0342)
NATD experience frequency in 5 years	0.0647***					
	(0.0066)					
NATD experience frequency in 5 years X NATD incidents	0.0012***					
	(0.0003)					
NATD experience frequency in 3 years		0.0388***				
		(0.0045)				
NATD experience frequency in 3 years X NATD incidents		0.0005**				
		(0.0002)				
NATD experience frequency in 2 years			0.0330***			
			(0.0036)			
NATD experience frequency in 2 years X NATD incidents			0.0004**			
			(0.0001)			
ARMC experience frequency in 5 years				0.2590***		
				(0.0506)		
ARMC experience frequency in 5 years X ARMC incidents				0.0327***		
				(0.0098)		
ARMC experience frequency in 3 years					0.2286***	
					(0.0423)	
ARMC experience frequency in 3 years X ARMC incidents					0.0291***	
					(0.0079)	
ARMC experience frequency in 2 years						0.1384***
						(0.0378)
ARMC experience frequency in 2 years X ARMC incidents						0.0125†
						(0.0066)
Firm tangible assets (log)	0.0663***	0.0473***	0.0537***	0.0695***	0.0485***	0.0532***
	(0.0106)	(0.0079)	(0.0068)	(0.0106)	(0.0079)	(0.0068)
Annual sales growth	0.0021	−0.0012	−0.0012	0.0022	−0.0011	−0.0011
	(0.0032)	(0.0013)	(0.0013)	(0.0032)	(0.0013)	(0.0013)
R&D capability	−2.0367***	−1.6491***	−1.7990***	−2.0052***	−1.6149***	−1.7675***
	(0.2059)	(0.1667)	(0.1553)	(0.2064)	(0.1670)	(0.1555)
Marketing capability	2.2326***	2.6161***	2.0651***	2.2732***	2.6748***	2.1361***
	(0.4716)	(0.3751)	(0.3421)	(0.4734)	(0.3759)	(0.3428)
Reputation	0.3746***	0.3618***	0.2855***	0.3658***	0.3588***	0.2858***
	(0.0487)	(0.0385)	(0.0345)	(0.0489)	(0.0386)	(0.0346)
Financial capability	0.0005***	0.0005***	0.0005***	0.0005***	0.0005***	0.0005***
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Managerial capability	−0.1995***	−0.0759*	−0.0505†	−0.1937***	−0.0755*	−0.0500†
	(0.0443)	(0.0332)	(0.0302)	(0.0445)	(0.0333)	(0.0303)
Geographic diversification	0.7193***	0.9770***	0.9760***	0.7567***	1.0201***	1.0078***
	(0.1089)	(0.0754)	(0.0648)	(0.1094)	(0.0755)	(0.0649)
Uncertainty avoidance	0.0543	−0.0372	−0.0860**	0.0632	−0.0336	−0.0807**
(Home country)	(0.0406)	(0.0305)	(0.0264)	(0.0407)	(0.0306)	(0.0265)
Political constraints	−0.0160	0.5263***	0.5650***	0.0802	0.5899***	0.6056***
(Home country)	(0.1504)	(0.1081)	(0.0971)	(0.1508)	(0.1081)	(0.0972)
Government stability	−0.0190†	0.0176*	0.0226***	−0.0224*	0.0163*	0.0204**
(Home country)	(0.0103)	(0.0075)	(0.0068)	(0.0104)	(0.0075)	(0.0068)
Annual GDP growth	0.0069	−0.0098*	−0.0059†	0.0063	−0.0099*	−0.0069*
(Host country)	(0.0069)	(0.0039)	(0.0033)	(0.0069)	(0.0039)	(0.0033)
Population (log)	1.1301	0.2376	0.1031	1.0069	0.1629	0.0139
(Host country)	(0.7719)	(0.4586)	(0.3839)	(0.7743)	(0.4592)	(0.3843)
Land size (log)	29.3951***	−1.3024	−2.5515	28.6560***	−1.4316	−2.2268
(Host country)	(0.9427)	(6.2253)	(3.7591)	(0.9454)	(6.2345)	(3.7655)
Import (% of GDP)	0.0006	−0.0006	0.0006	0.0017	0.0005	0.0011
(Host country)	(0.0021)	(0.0014)	(0.0013)	(0.0021)	(0.0014)	(0.0013)
Inward FDI (% of GDP)	−0.0018	0.0004	0.0006†	−0.0018	0.0006	0.0006†
(Host country)	(0.0014)	(0.0006)	(0.0003)	(0.0014)	(0.0006)	(0.0003)
Political constraints	0.0939	0.0907	0.0526	0.1383	0.0968	0.0531
(Host country)	(0.1318)	(0.0865)	(0.0736)	(0.1323)	(0.0868)	(0.0737)
Government stability	−0.0201†	0.0022	0.0039	0.0024	0.0154*	0.0112
(Host country)	(0.0108)	(0.0078)	(0.0069)	(0.0108)	(0.0078)	(0.0069)
Geographic distance	−0.1411***	−0.1646***	−0.1521***	−0.1475***	−0.1697***	−0.1563***
	(0.0218)	(0.0160)	(0.0141)	(0.0219)	(0.0161)	(0.0142)

Table 3 (*continued*)

Type of Non−market events	Natural disasters			Armed Conflicts		
Model	5 years (1)	3 years (2)	2 year (3)	5 years (4)	3 years (5)	2 year (6)
Sharing common border	0.0363	0.0305	0.0095	0.0360	0.0322	0.0120
	(0.0483)	(0.0368)	(0.0334)	(0.0485)	(0.0369)	(0.0335)
Sharing common language	0.3084***	0.3717***	0.3921***	0.3211***	0.3814***	0.3968***
	(0.0408)	(0.0303)	(0.0271)	(0.0409)	(0.0303)	(0.0272)
Colonial relationship	−0.0335	0.0023	0.0141	−0.0279	0.0087	0.0193
	(0.0440)	(0.0340)	(0.0309)	(0.0442)	(0.0341)	(0.0310)
Regional trade agreements	0.0140	0.0277	0.0503†	0.0184	0.0339	0.0571*
	(0.0406)	(0.0312)	(0.0283)	(0.0408)	(0.0312)	(0.0283)
Currency unions	−0.0165	0.0647†	0.0831*	−0.0219	0.0659†	0.0806*
	(0.0516)	(0.0386)	(0.0348)	(0.0519)	(0.0387)	(0.0349)
Self−selection parameter	0.1054	0.2974***	0.2780***	0.1171	0.3207***	0.2940***
	(0.0925)	(0.0625)	(0.0534)	(0.0929)	(0.0626)	(0.0535)
Over−expansion parameter	−0.8665***	−0.8168***	−0.7772***	−0.8516***	−0.8084***	−0.7707***
	(0.0181)	(0.0140)	(0.0125)	(0.0180)	(0.0140)	(0.0125)
Number of observations	14,138	22,664	27,394	14,138	22,664	27,394
AIC	59,283	95,906	116,795	59,423	96,029	116,919

Note: [a] See note in Table 2.

likely it is that a firm will not divest in an area affected by natural disasters or armed conflicts. Likewise, experience with high-intensity non-market risks makes it more likely that a firm will not disinvest from a location affected by a major disaster. Experience with low-intensity non-markets events, on the other hand, does not help MNCs overcome non-market risks. Several countries have experienced various types of swine flu recently. Except for the impact of H1N1 in 2009, their impacts were low and limited to few countries such as Myanmar, Pakistan, Malta, Morocco, Iran, and India, and thus MNCs did not have enough experience to develop their capabilities or realize the importance of such risks. In addition, experience with low-intensity events may increase a firm's confidence in a foreign country (the direct effect of experience with low-intensity events is positive), but such low profile experience does not enhance risk management capabilities (as seen in the interaction between experience with low-intensity non-market events and the severity of non-market events). The benefits of experience with frequent and high-impact risks are not different for natural disasters and armed conflicts likely because these non-market events are mostly exogenous and episodic risks to MNCs.

Drawing on organizational learning theory around non-market risk management, we contribute to the existing literature by examining whether and how MNCs learn from previous experience with rare non-market events. Earlier studies focused on what factors affected experiential learning in host countries (Lu et al., 2014), and thus paid less attention to the theoretical mechanisms explaining the internal process of learning. To reconcile the research on organizational forgetting and organizational routines with organization learning in turbulent environments, our study theoretically shows and provides empirical evidence on how firms change their FDI decisions as a result of experiential learning around non-market risks. Based on these contributions, we show how firms acquire knowledge from experience in episodic non-market events and how such experiential learning directly affects FDI decision (Pedersen and Shaver, 2011).

Second, the study fulfills the need for research on the boundary conditions of experiential learning. A key question in the literature is why and how some firms not only continue to operate in countries with high non-market risks but even establish new investments in such difficult environments. According to Buckley et al. (2020), experiential learning does not provide any benefit when firms face exogenous risks, which refers to a 'risk as determined fully by the external environment' (p. 1), and 'risks concern threats deriving from rare events such as terrorism attacks, and natural and industrial/technological disasters, for example (Lampel et al., 2009; Oh and Oetzel, 2011; Oh, 2017)' (p. 3). However, our study provides a boundary condition where experiential learning becomes beneficial and firms can take advantage of learning by investing in host countries with episodic non-market risks while other firms divest from or avoid such locations.

Third, this study contributes to the literature on international risk management by demonstrating that not all exogenous risks are unmanageable. Previous research on non-market risks has argued that unexpected and episodic non-market risks may be unmanageable and, therefore, the general long-standing belief among managers is to avoid countries with non-market risks (Holburn and Zelner, 2010). In contrast to these findings, the present study provides evidence that episodic non-market risks can also be manageable. Specifically, managers who have recent and more frequent experience with high-impact risks are likely to manage the risks rather than to avoid them. We present this idea with firm-level evidence and argue that the perception of managers toward unmanageable risks changes into manageable risks through experiential learning.

This paper also contributes to the literature on international management. Scholars in international management emphasize learning in the internationalization process and how previous experience with institutions and culture in host countries affects this process, but they rarely discuss the mechanisms around how this occurs (Johanson and Vahlne, 1977; Andersen, 1993; Delios and Beamish, 2001). Our study identifies the theoretical mechanisms that affect how and why managers change their perceptions as a result of experiential learning from non-market risks. Along with this, our study provides evidence of how firms change their practices

Table 4

High−impact experience and FDI decision[a].

Type of Non−market events	Natural disasters				Armed Conflicts		
Model	Events	Experience	Interactions		Experience	Interactions	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
High intensity NATD incidents	0.0079	0.0939***	−0.0536†	0.0898**	0.0262	0.0208	0.0172
	(0.0301)	(0.0273)	(0.0317)	(0.0274)	(0.0300)	(0.0299)	(0.0301)
Low intensity NATD incidents	0.0132	0.1034***	0.0785***	0.1083***	0.0523**	0.0405*	0.0518**
	(0.0172)	(0.0158)	(0.0168)	(0.0159)	(0.0172)	(0.0172)	(0.0172)
High intensity ARMC incidents	−0.1568***	−0.2063***	−0.2001***	−0.2072***	−0.1028*	−0.1126*	−0.0796†
	(0.0475)	(0.0439)	(0.0441)	(0.0439)	(0.0467)	(0.0470)	(0.0473)
Low intensity ARMC incidents	−0.0937*	−0.1266**	−0.1265**	−0.1221**	−0.1901***	−0.2102***	−0.1995***
	(0.0458)	(0.0423)	(0.0424)	(0.0423)	(0.0455)	(0.0462)	(0.0471)
Experience in high intensity NATD		0.0857***	0.0860***	0.0963***			
		(0.0021)	(0.0021)	(0.0081)			
Experience in low intensity NATD		0.0669***	0.0584***	0.0666***			
		(0.0010)	(0.0019)	(0.0010)			
Experience in high intensity NATD X High intensity NATD incidents			0.0419***				
			(0.0046)				
Experience in high intensity NATD X Low intensity NATD incidents			0.0089***				
			(0.0021)				
Experience in low intensity NATD X High intensity NATD incidents				−0.0044			
				(0.0086)			
Experience in low intensity NATD X Low intensity NATD incidents				−0.0199*			
				(0.0085)			
Experience in high intensity ARMC					0.0362***	0.0174***	0.0362***
					(0.0025)	(0.0025)	(0.0025)
Experience in low intensity ARMC					0.0642***	0.0712***	0.1150***
					(0.0032)	(0.0033)	(0.0251)
Experience in high intensity ARMC X High intensity ARMC incidents					0.0737***		
					(0.0141)		
Experience in high intensity ARMC X Low intensity ARMC incidents					0.0490***		
					(0.0054)		
Experience in low intensity ARMC X High intensity ARMC incidents							−0.0691**
							(0.0257)
Experience in low intensity ARMC X Low intensity ARMC incidents							−0.0476†
							(0.0253)
Firm tangible assets (log)	0.0370***	0.0259***	0.0250***	0.0256***	0.0312***	0.0303***	0.0312***
	(0.0059)	(0.0053)	(0.0053)	(0.0053)	(0.0059)	(0.0058)	(0.0059)
Annual sales growth	0.0002	0.0005*	0.0005**	0.0004*	0.0002	0.0002	0.0002
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
R&D capability	−1.8348***	−1.1942***	−1.2123***	−1.1873***	−1.8442***	−1.8590***	−1.8405***
	(0.1460)	(0.1318)	(0.1318)	(0.1318)	(0.1445)	(0.1444)	(0.1445)
Marketing capability	2.0854***	1.4694***	1.4393***	1.4722***	2.0229***	1.9669***	2.0304***
	(0.3102)	(0.2791)	(0.2788)	(0.2790)	(0.3066)	(0.3063)	(0.3065)
Reputation	0.2214***	0.1892***	0.1863***	0.1898***	0.2006***	0.1971***	0.2014***
	(0.0293)	(0.0256)	(0.0256)	(0.0256)	(0.0289)	(0.0289)	(0.0289)
Financial capability	0.0004***	0.0003***	0.0003***	0.0003***	0.0004***	0.0004***	0.0004***
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Managerial capability	0.0130	−0.0241	−0.0211	−0.0245	0.0439	0.0484†	0.0438
	(0.0274)	(0.0245)	(0.0245)	(0.0245)	(0.0272)	(0.0272)	(0.0272)
Geographic diversification	0.8773***	0.6112***	0.5966***	0.6117***	0.7521***	0.7181***	0.7568***
	(0.0546)	(0.0487)	(0.0487)	(0.0487)	(0.0541)	(0.0542)	(0.0541)
Uncertainty avoidance (Home country)	−0.0956***	−0.0020	−0.0043	−0.0034	−0.1113***	−0.1133***	−0.1118***
	(0.0234)	(0.0212)	(0.0211)	(0.0212)	(0.0232)	(0.0231)	(0.0232)
Political constraints (Home country)	0.4422***	0.2609***	0.2511**	0.2595***	0.4052***	0.3750***	0.4102***
	(0.0858)	(0.0782)	(0.0781)	(0.0782)	(0.0852)	(0.0852)	(0.0852)
Government stability (Home country)	0.0161**	0.0160**	0.0160**	0.0163**	0.0146*	0.0147*	0.0144*
	(0.0061)	(0.0055)	(0.0055)	(0.0055)	(0.0061)	(0.0061)	(0.0061)
Annual GDP growth (Host country)	−0.0030	−0.0054*	−0.0053*	−0.0054*	−0.0008	−0.0001	−0.0008
	(0.0029)	(0.0026)	(0.0026)	(0.0026)	(0.0028)	(0.0028)	(0.0028)
Population (log) (Host country)	0.0553	0.7997**	0.7220*	0.8060**	0.0519	0.0038	0.0670
	(0.3215)	(0.2904)	(0.2903)	(0.2903)	(0.3181)	(0.3179)	(0.3181)
Land size (log) (Host country)	−2.0798	1.5508	1.0915	1.7016	−0.8816	−0.7421	−1.1179
	(2.8831)	(2.5728)	(2.5703)	(2.5721)	(2.8495)	(2.8454)	(2.8499)
Import (% of GDP) (Host country)	0.0016	0.0024*	0.0023*	0.0024*	0.0022†	0.0019	0.0023†
	(0.0012)	(0.0011)	(0.0011)	(0.0011)	(0.0012)	(0.0012)	(0.0012)
Inward FDI (% of GDP) (Host country)	0.0005*	0.0007***	0.0007***	0.0007***	0.0004†	0.0004†	0.0004†
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Political constraints (Host country)	−0.0414	0.0680	0.0446	0.0678	−0.0697	−0.0783	−0.0674
	(0.0638)	(0.0578)	(0.0579)	(0.0579)	(0.0631)	(0.0632)	(0.0632)

(*continued on next page*)

Table 4 (*continued*)

Type of Non−market events	Natural disasters				Armed Conflicts		
Model	Events	Experience	Interactions		Experience	Interactions	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Government stability	0.0063	0.0061	0.0055	0.0042	0.0080	0.0047	0.0096
(Host country)	(0.0062)	(0.0056)	(0.0056)	(0.0056)	(0.0061)	(0.0061)	(0.0062)
Geographic distance	−0.1429***	−0.1004***	−0.0993***	−0.1006***	−0.1253***	−0.1226***	−0.1259***
	(0.0124)	(0.0111)	(0.0111)	(0.0111)	(0.0123)	(0.0122)	(0.0123)
Sharing common border	0.0103	−0.0562*	−0.0635*	−0.0534*	−0.0087	−0.0150	−0.0087
	(0.0305)	(0.0272)	(0.0272)	(0.0272)	(0.0302)	(0.0301)	(0.0302)
Sharing common language	0.3726***	0.2896***	0.2890***	0.2880***	0.3522***	0.3415***	0.3532***
	(0.0243)	(0.0217)	(0.0216)	(0.0217)	(0.0241)	(0.0241)	(0.0241)
Colonial relationship	0.0184	−0.0560*	−0.0544*	−0.0556*	0.0279	0.0338	0.0280
	(0.0284)	(0.0251)	(0.0251)	(0.0251)	(0.0280)	(0.0280)	(0.0280)
Regional trade agreements	0.0724**	0.0357	0.0383†	0.0346	0.0629*	0.0594*	0.0632*
	(0.0258)	(0.0231)	(0.0231)	(0.0231)	(0.0256)	(0.0255)	(0.0256)
Currency unions	0.0636*	0.0043	−0.0023	0.0062	0.0755*	0.0721*	0.0765*
	(0.0316)	(0.0283)	(0.0283)	(0.0283)	(0.0312)	(0.0312)	(0.0312)
Self−selection parameter	0.2225***	0.1393***	0.1293**	0.1393***	0.1588***	0.1334**	0.1631***
	(0.0446)	(0.0400)	(0.0400)	(0.0400)	(0.0441)	(0.0443)	(0.0442)
Over−expansion parameter	−0.7440***	−1.1780***	−1.1829***	−1.1795***	−0.7820***	−0.7868***	−0.7827***
	(0.0113)	(0.0133)	(0.0133)	(0.0133)	(0.0115)	(0.0115)	(0.0115)
Number of observations	32,766	32,766	32,766	32,766	32,766	32,766	32,766
AIC	140,205	130,831	130,746	130,820	139,341	139,236	139,332

Note: [a] See note in Table 2.

in the face of different non-market risks. Previously, institutional and cultural differences among countries have been considered the main external factors that affect the FDI decisions of firms (Lu et al., 2014). However, as aforementioned, due to the increasing number of disastrous events, such as armed conflicts, natural disasters, and the recent COVID-19 pandemic, non-market risks are not rare nor easy to avoid. These non-market risks create new challenges for MNCs that need to efficiently and effectively manage their organizations in the face of these risks. In this paper, we examined how MNC's organizational learning capability may help MNCs to respond to non-market risks.

Our findings have several implications. First, there is a potential way to overcome even the riskiest events. Environmental turbulence may be a catalyst for changing a firm's strategies and behaviors in a way that enhances long-term performance and enables a firm to take advantage of new opportunities that it would otherwise ignore (Lant et al., 1992). Moreover, there is evidence that, "organizations that radically and quickly alter[ed] their formal structures, decision-making routines, and information-processing devices performed better over their lives than organizations that changed gradually or incrementally" [Romanelli and Tushman (1994, p. 1142) citing Miller and Friesen (1982, 1984)]. Without a major environmental punctuation, a change to firms' established organizational routines and decision-making processes is unlikely to occur (Romanelli and Tushman, 1994). In particular, MNCs are often exposed to a variety of economic, political and social environments, thus the catalyst to change existing practices should be large and substantial; otherwise, managers will not change their dominant logic.

Another implication of our study is that not all experience is equal and more recent experience is more valuable than distant past experience. This is consistent with the notion that the further managers look back in time, the less reliable their memory (Golden, 1992). In addition, firms may fail to recognize how important experience is or forget it entirely. When they do, they are prone to stick with their current routine. Therefore within an MNC, subsidiaries may not actively share their distant past experience about episodic risks with other subsidiaries (de Holan and Phillips, 2004b). Of course, it may also be that once managers are repatriated to their home country, they are less likely, or unable, to share their experiences in a host country with other subsidiaries (de Holan and Phillips, 2004b; de Holan et al., 2004). For this reason, we would expect that only experience with recent events, particularly memorable risks, would serve as valuable input for reconsidering a firm's decision and approach to risk. If managers use distant past experience, they are apt to make decisions that suffer from retrospective errors and therefore risk learning the "wrong" or "biased" lesson from experience (March et al., 1991). Timing and temporal issues have been neglected in the international management literature, and thus our findings about recent vs. distant experience provide even broader implications to research on temporal dynamics in experiential learning and international management research.

A third implication is that there is accumulating evidence suggesting that managers can, in fact, learn to manage the "seemingly unmanageable." Unlike the recent finding by Buckley et al. (2020), who found that learning mechanisms do not apply to exogenous risks, we found three boundary conditions – recent experience, frequent experience, and experience with high-impact risks – for the learning mechanisms around managing non-market risks. Given the nature of the risks that many managers face today, and the fact that most major non-market risk events do not lend themselves to prediction, experiential learning may be a potentially valuable source of risk management capabilities. In particular, in an environment where non-market risks and uncertainties are increasing, firms that recognize opportunities where others see risk will be uniquely positioned.

5.1. Future directions

A necessary next step is to assess the differential organizational outcomes for firms that relied on various types of experiential learning to inform their strategy. Do these firms outperform competitors in the long-term? Research indicates that this may indeed be the case but more work is needed in this area (Miller and Friesen, 1982, 1984). If managing non-market risks provides competitive advantages to MNCs, it would be important to look at the effect on organizational performance (e.g., financial and stakeholder management performance) or survival. Thus, if a firm's experiential learning leads to the development of managerial capabilities against non-market risks, the firm may have the ability to manage non-market risks by deploying its resources and competencies which increase its performance and likelihood of survival (Bingham and Eisenhardt, 2011).

Likewise future research should articulate differences across types of non-market risks and examine how MNCs consider those differences in making strategic decisions. In addition, it is important to analyze how such differences affect the mechanisms for transforming experience into experiential learning. For example, the involvement of human factors in human-made non-market risks may make it easier for firms to internalize risk management capabilities compared to natural disasters. Even within human-made non-market risks, non-episodic institutional risks such as corruption, regime changes, and regulatory environments can be manageable through experiential knowledge compared to episodic risks such as wars, terrorisms, industrial disasters, and pressures from activist groups (Oetzel and Oh, 2015).

From the microfoundation perspective of MNCs (Kano and Verbeke, 2019), another important next step would be to explore the internal decision-making process within organizations experiencing non-market risks to better understand why managers change their response to risks from avoidance or ignorance to management. This approach might also yield insights into the organizational resilience process of how firms form different strategies and responses from similar experiences, a particularly intriguing line of inquiry since it is the heterogeneity among different firms that ultimately leads to differences in organization outcomes (Hsu et al., 2019; Kumar et al., 2020). A recent study argues that crisis management in China is different from that in western countries (Wang and Laufer, 2020). In addition, the relatively recent and rapid internationalization of emerging economy MNCs means that they often have less experience with foreign non-market risks compared to advanced economy MNCs (e.g., Gaur and Kumar, 2010), and thus their responses are expected to be different.

Finally, since all empirical studies have their limitations, future studies should confirm our findings. First, the sample of our study only includes large firms whose risk-response behavior could be different from small and medium sized firms. In particular, the entrepreneurial characteristics of new venture firms may lead them to manage and overcome risks rather than avoid them, regardless of experiential learning. In addition, our data stopped in 2008, and thus future research should update the data and reexamine the research questions. In particular, future research should examine whether global financial crises and COVID-19 affect the behavior of firms responding to non-market risks. Second, future research may analyze the entry mode choice decision rather than the location choice decision. MNCs may still enter and expand in challenging locations through low-commitment entry modes such as licensing and partnerships instead of wholly owned subsidiaries or joint ventures that require considerable resource commitment. Third, our dependent variable in this study is a count variable (i.e., number of subsidiaries). It is possible that some firms may decrease the size of existing subsidiaries rather than divest them. Thus while studies in international business and management have frequently used the count variable, the size of assets or investment should be a better measure for the dependent variable. Fourth, following the literature on experiential learning in international strategic management, we used firm exposure to risks as a proxy for experience, thus we could not directly measure the process of experiential learning or the mechanisms by which it occurs within MNCs. Future research should investigate how experience occurs in a subsidiary, how such experience transfers within an MNC, and how experience transforms into learning using a micro-level lens. While this paper theoretically explains the processes and mechanisms that are behind experiential learning, a large scale econometric study like ours cannot directly identify these processes or mechanisms that are internal to the firm. Thus we call for future research on experiential learning and non-market risks at the micro-level. Fifth, according to previous studies, firms' abilities to build political ties, sometimes through philanthropic donations, are also important factors that mediate the negative impact of non-market risks. Thus, future research may analyze the contingency effects of firms' political, philanthropic and network capabilities (Pek et al., 2018; White et al., 2018; White et al., 2020).

5.2. Conclusion

This study investigated how past experience with non-market risks changes managers' FDI location decisions from avoidance to managing risks. Considering that natural disasters and armed conflicts have been increasing in number, frequency, and severity and are not rare events, managing these risks may enable firms to operate in countries with severe non-market risks. Our findings indicate that recent, frequent, and high-impact experience can change a firm's risk avoidance in FDI location decisions, and thus firms are less likely to avoid countries with non-market risks. We hope that this study can be used as a platform for further research into how experience and learning can be used to manage various types of emerging international non-market risks.

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