



Psychic distance and performance of MNCs during marketing crises

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Abstract

When multinational corporations face foreign marketing crises, the psychic distance between the home and host country represents a distinct challenge. This paper examines the curvilinear relationship between psychic distance and firm performance during marketing crises, and the moderating role of marketing capabilities. We test our hypotheses using an event study on a panel dataset of 217 firms based in 19 countries facing crises in 41 host countries. The results show that (1) marketing crises are most harmful when the host country is either very close or far away and (2) firms can mitigate this effect with marketing capabilities.

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INTRODUCTION

Marketing crises – broadly defined as publicized negative events stemming from marketing mix related activities (Clark, 1988) – can be disastrous for any company. They can destroy carefully nurtured brand equity, cause major revenue and market-share losses, and lead to a significant decline in firm value (e.g., Cleeren, van Heerde, & Dekimpe, 2013; Dawar & Pillutla, 2000; van Heerde, Helsen, & Dekimpe, 2007; Xiong & Bharadwaj, 2013). However, research has yet to systematically investigate the dynamics of *international* marketing crises. Firms today are extremely dependent on overseas sales for both growth and profits. Nearly half of the total revenues of S&P 500 firms comes from overseas markets (Dow, 2016). High dependence on overseas markets means that multinational companies (MNC) may reasonably fear that they will be confronted with a marketing crisis in a foreign country. Heavy reliance on foreign markets invites questions about the impact of the overseas element of a marketing crisis on firm performance.

It stands to reason that a marketing crisis in any overseas market will typically have adverse consequences. However, do the adverse consequences systematically vary between different foreign markets? Extant research has looked at marketing crises occurring in one particular country, but has not considered the relationship between the home country of the company and the country where

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the crisis occurs. For example, consider van Heerde et al.'s (2007) study on the effects of a product-harm crisis against Kraft (home country: US) in Australia (host country). Would the total effect be better or worse if Kraft experiences a similar crisis in Canada or Japan? Similarly, what would happen if a comparable French company experiences the same crisis in Australia? To answer this question, we utilize the concept of psychic distance.

Johanson & Vahlne, (1977: 24) define psychic distance between the home and host country as "the sum of factors preventing the flow of information from and to the market." The international business literature suggests that psychic distance affects the ability to effectively manage activities in overseas markets (Barkema & Vermeulen, 1998; Johanson & Vahlne, 1977; Kostova, 1999). Moreover, the meta-analysis of Tihanyi, Griffith, & Russell, (2005) shows that the effects of psychic distance on performance exhibit substantial heterogeneity across firms. For example, Zaheer, Schomaker, & Nachum, (2012: 18) argue for "allowing for the influence of firm-level characteristics that... moderate the effects of distance." We propose that a firm's marketing capability is a key component of determining the impact of a marketing crisis in a distant market. The central role of marketing capabilities on firm performance is well established as it provides flexible strategic options that can be deployed in ways consistent with environmental forces (Day, 2011). However, present research has not considered whether marketing capabilities are effective in overcoming challenges created by psychic distance in overseas markets.

In sum, this article seeks to address two research questions: (1) Are the adverse consequences of a marketing crisis related to psychic distance between the home country of the MNC and the host country of a crisis? If so, what is the nature of the relationship? (2) Do marketing capabilities dampen the effect of psychic distance? Can marketing capabilities overcome the liability of foreignness?

The unpredictable nature of a marketing crisis creates a type of natural experiment where some firms are subjected to a crisis, and then can be compared to the broader universe of publicly traded firms. Following past research (Chen, Ganesan, & Liu, 2009; Gielens, Van de Gucht, Steenkamp, & Dekimpe, 2008; Xiong & Bharadwaj, 2013), this paper uses an event study to calculate cumulative abnormal stock returns (for simplicity, referred to as change in shareholder value) as a performance metric for assessing the effect of a

marketing crisis in an overseas market. Event studies are an ideal technique for this type of study because they measure the actual change in value of a firm compared to its expected change in value, taking account market conditions. Specifically, any change in stock market valuation takes into account the expected changes in long-term future cash flow (Geyskens, Gielens, & Dekimpe, 2002). The advantages of using shareholder value as a performance metric are that it is forward looking, integrates multiple dimensions of performance, and is less easily manipulated by managers than other measures (Gielens et al., 2008). Thus, an event study allows for causal identification of the total impact of the crisis, subject to heterogeneity in psychic distance and firm-level marketing capabilities.

We investigate these research questions by integrating multiple secondary sources of data to create a panel-dataset of 1451 observations derived from 217 publicly traded firms from 19 countries in 41 international markets in 75 B2B and B2C industries over a 7-year window. This is not only the largest data set on international marketing crises to date, it is also the first one to span so many home and host countries while examining the role of marketing capabilities in an international context. Thus, this sample is not subject to the single-country sample problem in international business (Brouthers, Marshall, & Keigh, 2016). In addition, our model specification controls for unobserved heterogeneity stemming from an individual firm, over time, home country and host country.

CONCEPTUAL DEVELOPMENT

This paper lies at the intersection of research on marketing crises, psychic distance, and marketing capabilities. While each has a rich literature, they have yet to be integrated. Thus, there is a lack of understanding about the role of psychic distance in a foreign marketing crisis, and the role that marketing capabilities may play in determining the outcome of a foreign marketing crisis. In this section, we connect literature from each area to develop hypotheses about how psychic distance influences the impact of a foreign marketing crisis, and how this effect is moderated by marketing capabilities.

Marketing Crises and Firm Performance

We consider marketing crises to be actions (or lack thereof) that are attributable to the firm.¹ Specifically, these events stem from a marketing-mix



related activity. Examples include products where quality falls below legal stipulations and product-recalls (i.e., product crises), predatory and anti-competitive pricing (pricing crises), false advertising and lack of transparent communication (promotion crises), and poorly sourced product ingredients and unethical distribution practices (place crises). In accordance with prior literature, we also consider marketing crises to be events that threaten the marketing goals of the firm such as a decline in customer satisfaction, dilution of carefully nurtured brand equity, loss of market share, or decline in revenues (Srivastava, Shervani, & Fahey, 1998). Examples of crises that are not marketing related would be events such as financial fraud, general corruption, or environmental issues.

There is a substantial body of research on the outcomes of marketing crises on a variety of firm performance metrics including shareholder value (Xiong & Bharadwaj, 2013), sales (van Heerde et al., 2007), market share (Rhee & Haunschild, 2006), profitability (Hendricks & Singhal, 2008), brand equity (Dawar & Pillutla, 2000), and effectiveness of marketing efforts (Cleeren, Dekimpe, & Helsen, 2008). Prior research has also considered conditions under which the performance effect of a marketing crisis is more or less severe. Specifically, a marketing crisis has a stronger adverse effect on performance for larger firms (Tellis & Johnson, 2007), if news surrounding the crises is more negative (Cleeren et al., 2013), for more severe crises (Liu & Shankar, 2015), and if firms do not have corporate social responsibility initiatives (Klein & Dawar, 2004). These studies all find that marketing crises have a negative effect on firm performance. While these studies do not consider the international dimension, there is no reason to assume that marketing crises in overseas markets will not also negatively impact shareholder value. Hence we propose:

Hypothesis 1: Occurrence of a marketing crisis in a host country has a negative effect on shareholder value.

Psychic Distance

Beckerman, (1956) introduced the concept of psychic distance into the literature as a subjective influence that might help to explain existing trade patterns. The concept gained wider attention in the IB literature after being reintroduced and elaborated upon by a group of Swedish scholars associated with Uppsala University (Vahlne & Wiedersheim-Paul, 1973; Nordstrom & Vahlne,

1994; Johanson & Vahlne, 1977; Vahlne & Johanson, 2017). While the work of the Uppsala scholars suggests they regard psychic distance as an individual-level, perceptual construct, they might inadvertently have created ambiguity by proposing that psychic distance can be operationalized by indicators such “differences in language, education, business practices, culture, and industrial development, etc.” (Johanson & Vahlne, 1977: 24). These indicators are typically measured at the country level using secondary data rather than as individual-level perceptual variables (see Evans & Mavondo, 2002; Evans, Mavondo, & Bridson, 2008 for notable exceptions). To avoid confusion between the operationalization of psychic distance at the individual, perceptual level and the country level, Dow & Karunaratna, (2006) proposed to use the terms perceived psychic distance and psychic distance stimuli, respectively. The two constructs are related – perceived psychic distance can be considered as a function of psychic distance stimuli (Dow & Larimo, 2009; Håkanson & Ambos, 2010). While in theory, perceived psychic distance appears preferable to psychic distance stimuli as conceptualization of psychic distance in IB research, psychic distance stimuli measures are readily available and better applicable in large-scale empirical research, involving many firms and countries, which is the context of this study (Hutzschenreuter, Kleindienst, & Lange, 2014). In our study, we operationalize psychic distance with secondary data. Thus, when we use the term psychic distance, it refers to psychic distance stimuli.

Ever since the influential study by Kogut & Singh, (1988), much IB research has equated psychic distance with cultural distance. This was consistent with Kogut & Singh’s, (1988: 430) claim that “cultural distance is, in most respects, similar to the ‘psychic distance’ used by the Uppsala school.” The Kogut and Singh index, which is based on Hofstede’s, (2001) cultural dimensions, has become “the paradigmatic operationalization” of psychic distance in IB research (Håkanson & Ambos, 2010: 197). Yet, more recently, IB researchers have broadened psychic distance beyond Hofstede’s cultural dimensions to include economic, geographic, and institutional characteristics, among others (Berry, Guillen, & Zhou, 2010; Dow & Karunaratna, 2006). Moreover, scores on at least some of these country characteristics (e.g., economic stimuli or some facets of culture such as Inglehart & Welzel, 2005) change over time. We include these extensions in our work. In our work, psychic distance is

temporally dynamic and is based on a broad set of country characteristics.

The Role of Psychic Distance Between Home and Host Country on Firm Performance

Our first research question asks how psychic distance between the home country of the firm and the host country impacts firm performance in the wake of a marketing crisis. The IB literature offers two theoretical perspectives. According to the Uppsala School, psychic distance is generally viewed as having an increasingly negative impact on firm effectiveness in overseas markets (Johanson & Vahlne, 1977). Large psychic distance increases the costs to companies as it hinders effective information transfer across national boundaries. A contrasting view is called the psychic distance paradox. This proposes that firm performance is higher in psychically dissimilar markets (Evans & Mavondo, 2002; O'Grady & Lane, 1996). The underlying idea is that the firm will try harder in distant markets whereas psychic closeness breeds complacency (Magnusson, Schuster, & Taras, 2014).

There are empirical findings supporting both the Uppsala school and the psychic distance paradox. Rather than pitting one theory against the other in our theorizing and empirical study, we seek to integrate them in one framework. We propose two mechanisms that have theoretical and empirical support: (1) *anticipation* of differences between home and host market, and (2) *adaptation* to differences in foreign markets. The first mechanism suggests that in a psychically close market, firms fail to properly anticipate market characteristics, leading to more negative MNC performance following a crisis. The second mechanism proposes that very high levels of psychic distance between the home and host country lead to greater challenges in adapting the firm's strategy to that host market, leading to more adverse consequences in the wake of a marketing crisis, *ceteris paribus*.

Anticipation of Business Challenges in Low Psychic Distance Host Countries

At first, it seems paradoxical that firms might be less successful in psychically similar markets (Evans & Mavondo, 2002; Evans et al., 2008) – hence the name “psychic distance paradox” for this school of thought. O'Grady & Lane's, (1996) work suggests the cause of the psychic distance paradox is that

managers underestimate actual dissimilarities in low psychic distance markets. This causes managers to overlook modest, yet meaningful differences between home and host market. Fenwick, Edwards, & Buckley, (2003) call this ‘psychic overconfidence.’ These authors present case-study evidence on this mindset for Australian manufacturers in Great Britain while O'Grady & Lane, (1996) find this for Canadian retailers in the US.

Thus, research on the psychic distance paradox suggests that in psychically close markets, perceived psychic distance is smaller than “objective” psychic distance (psychic distance based on country indicators). Essentially, this is a manifestation of the psychological principle of generalization – the tendency to respond in the same way to different but similar stimuli. If the two stimuli (i.e., countries) are quite similar (low “objective” psychic distance), home-country managers may perceive them to be more or less the same as the home country (Perceived Psychic Distance ≈ 0). As a consequence, they do not anticipate any serious business challenges unique to that market. In support of this view, Fenwick et al., (2003) asked Australian CEOs what mistakes, if any, they had made when operating in Britain. All CEOs stressed “underestimating cultural factors” and “assuming that Britain was like home” (2003: 302). According to Fenwick et al., (2003: 302), the Australian CEOs “found themselves unprepared for the cultural differences that became apparent and this caused difficulty managing the subsidiary.”

In sum, it appears that a root cause of the psychic distance paradox is that psychic overconfidence in similar markets leads firms to inadequate anticipation of the differences that still exist in the host country. As argued by O'Grady & Lane, (1996), learning begins with the ability to anticipate differences, and low perceived psychic distance interferes with executives' motivation and ability to learn about those host countries. Instead, firms are inclined to use established home-country procedures and strategies, with disappointing results (Fenwick et al., 2003).

In contrast, firms will likely anticipate a higher level of risk when expanding in psychically distant markets. According to Evans et al., (2008: 36), “This risk perception elicits a strong desire to learn more about the market, which results in a deeper understanding of the challenges and opportunities presented by the market.”



Adaption Challenges in High Psychic Distance Host Countries

The issue of standardized marketing programs versus programs customized to the specific requirements of individual host countries has received much research attention (Katsikeas, Samiee, & Theodosiou, 2006). However, this is not a dichotomous decision (standardized vs. local) but rather a matter of degree (Jain, 1989). Firms make contingency choices in the degree of adaptation to foreign markets where the basis for the degree of adaptation is the comparison of market operation in the home market to the market operation in a foreign host market (Vrontis, Thrassou, & Lamprianou, 2009).

The literature further shows that adaptation is challenging. Adaptation calls into question whether the competitive advantage the firm has in its home market will transfer to overseas markets (Viswanathan & Dickson, 2007). That firms struggle with adaptation decisions is highlighted by Dow, (2006) who shows that firms generally adapt less than would be optimal for performance in that market. From a contingency perspective, the degree of adaptation required for success in a host market depends on the similarity in environmental conditions between home and host market (Katsikeas et al., 2006). These authors document that similarity of (regulatory, cultural) environment between home and host markets is positively related to the degree of marketing strategy standardization. In highly similar markets, firms tend to use standardized strategies while in highly dissimilar markets they are more prone to adapt their marketing strategy. They further show that superior performance results from the fit between the degree of international marketing strategy standardization/adaptation and the environmental context in which it is implemented.

These findings support Jain, (1989), who theorized that the higher the psychic distance between home and host market, the more the firm needs to adapt its marketing strategy, and the less the firm can draw upon learnings acquired in the home country to resolve problems in the host country (Mitra & Golder, 2002; Johnson & Tellis, 2008). Håkanson & Ambos, (2010: 195) summarize the adaptation challenges in relation to psychic distance: "... the more different a foreign environment is as compared to that of a firm's (or an individual's) country of origin, the more difficult it will be to collect, analyze and correctly interpret information about it, and the higher are therefore the

uncertainties and difficulties – both expected and actual – of doing business there."

Thus, this literature suggests that adaptation challenges increase with psychic distance. A marketing crisis requires a quick and effective response, and intensive communications within the MNC, which is complicated by distance. Psychic distance further influences collection and transmission of critical management information as monitoring challenges increase with distance (Carr, Markusen, & Maskus, 2001; Liu, Chung, Sul, & Wang, 2018).

Net Effect of Psychic Distance During a Marketing Crisis

What is the nature of the net effect of psychic distance on firm performance during a marketing crisis? We argue that the relative weight of challenges of anticipation and adaption, two opposing forces, depends on the *level* of psychic distance. Previous research focusing on the psychic distance paradox has shown that the impact of anticipation across psychic distance is strongest at low levels of psychic distance, which is consistent with generalization theory. At low levels of psychic distance, we expect the impact of the crisis to be more negative due to (1) a strong lack of anticipation of differences between home and host market (O'Grady & Lane, 1996) and (2) a modest level of adaptation challenges to the foreign market, which is still relatively similar to the home market (Jain, 1989). We also expect that the effect of increased anticipation exhibits decreasing marginal positive effect as generalization works only at a low level of dissimilarity. That is, whether two countries are moderately dissimilar or very dissimilar, managers are not likely to 'regress' to the home country.

On the other hand, adaptation challenges will continue to increase strongly with increasing psychic distance (Hutzschenreuter et al., 2014). At high levels of psychic distance, we expect a strong negative net effect due to (1) decreased additional increases in anticipation – if home and host countries are very distant, the firm likely anticipates that there are substantial differences to be taken into account, and (2) ever increasing challenges to adapt to the different host-country environment.

The net effect of these two opposing forces, depicted in Figure 1, is an inverted-U relationship between psychic distance and the negative consequences of a marketing crisis.

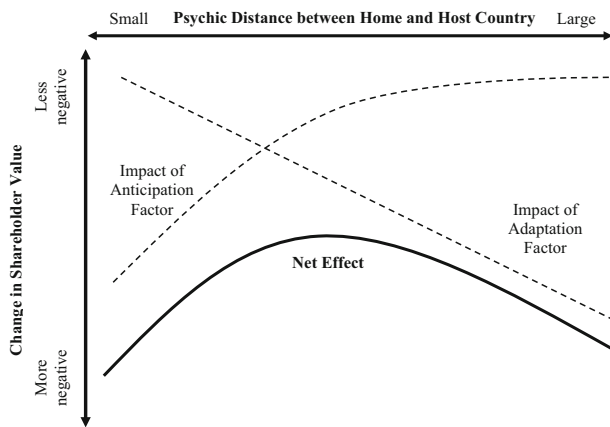


Figure 1 The dual effect of psychic distance on firm performance in an overseas market in the wake of a marketing crisis.

Hypothesis 2: During a marketing crisis, the effect of psychic distance on shareholder value follows an inverted-U shape.

The Moderating Role of Marketing Capabilities on the Effect of Psychic Distance

The resource-based view of the firm considers the organization to be a bundle of heterogeneously distributed resources and capabilities (Barney, 1991). Resources are defined as (tangible and intangible) productive factors that a firm uses to achieve its business objectives, while capabilities refer to the firm’s ability to deploy these resources efficiently to reach the desired end (Makadok, 2001). Marketing capabilities are fundamental to the firm’s success in that they are the organizational processes through which resources are combined and transformed into value offerings, resulting in competitive advantages (Day, 2011).

Xiong & Bharadwaj, (2013) find that the negative consequences of a domestic marketing crisis are less severe when the firm has high marketing capabilities. There is no reason to assume that this would not apply to a marketing crisis in overseas market as well. More relevant for this research, is whether marketing capabilities moderate the effect of psychic distance on firm performance during a marketing crisis. Recently, Moorman & Day, (2016) propose that firms with high marketing capabilities are better in *anticipating* marketplace differences and changes, and in *adapting* to such different contexts. As discussed above, anticipation and adaptation are key elements in our understanding how psychic distance effects firm performance in a marketing crisis.

First, high psychic distance requires extensive adaptation to be successful in the host market. Yet, adaptation is difficult. The more the strategy has to be adapted, the less the firm can rely on transfers of business practices from the home country to its overseas subsidiaries – practices that reflect its superior knowledge and that are a proven source of competitive advantage (Kostova, 1999). The more dissimilar the host country is, the less able the MNC is to transfer its proven and tested sources of competitive advantage to that market (Viswanathan & Dickson, 2007). Thus, in high psychic distance countries, the MNC has to rely more on local market sensing, knowledge management capabilities, and local capabilities to design and implement marketing plans. Importantly, these are all elements of marketing capabilities (Moorman & Day, 2016: 12). Drawing on theorizing by Xiong & Bharadwaj, (2013), marketing capabilities allow for better understanding of customer needs in that foreign market. Further, marketing capabilities allow for better prediction of customer reactions and changes in customer behavior following a marketing crisis. Firms that can better predict customer behavior can provide more tailored marketing strategies and develop products more in line with the customers. That should reduce the likelihood of customers terminating relationships with the company in the aftermath of a marketing crisis. Finally, marketing capabilities help firms to better handle customer complaints after the crisis and thus reduce the cost of service recovery (Xiong & Bharadwaj, 2013). Thus, we expect that marketing capabilities positively impact the firm’s ability to adapt to challenges created by high psychic distance.

Second, low psychic distance poses the challenge of lack of anticipation of subtle, yet important differences between home and host country. Marketing capabilities can mitigate this danger because firms with high marketing capabilities exhibit stronger anticipation activities. This, as argued by Moorman & Day, (2016: 27) “provide an early and accurate understanding of external threats and opportunities so the firm can serve the market better than competitors and even mold the market to its advantage.”

The above arguments imply that compared to a firm with low marketing capabilities, a firm with high marketing capabilities is better able to adapt its strategy to the conditions of psychically dissimilar markets and is better able to anticipate small, yet important differences in psychically similar



markets. In other words, we expect that the downward slope of the adaptation factor in Figure 1 is less steep for firms with high marketing capabilities and that the downward slope at low psychic distance of the anticipation factor is less pronounced. As a consequence, psychic distance will have a smaller effect on the performance consequences of a marketing crisis for a firm high on marketing capabilities (flatter curve). In contrast, when marketing capabilities are low, there should be a more pronounced inverted-U relationship between psychic distance and extent of the impact of the crisis.

Hypothesis 3: During a marketing crisis, marketing capabilities moderate the effect psychic distance on change in shareholder value. High marketing capabilities will dampen the effect of psychic distance on change in shareholder value.

DATA

We test the proposed hypotheses using event study methodology. An event study estimates the change in stock market valuation of a firm after new information is made publicly available (e.g., a marketing crisis). This change is defined to be the difference between the post hoc firm equity valuation, and the expected equity valuation given that there had been no marketing crisis. The expected value is based on a benchmark asset pricing model. The difference between firm value and its expectation, labeled the abnormal return, is effectively a difference-in-differences estimate. Thus, event studies are particularly attractive as they are a form of natural experiment.

A key assumption of event studies is that the market quickly and efficiently accounts for the total impact of any 'new information' about the firm. The 'collective wisdom' of the market then identifies the impact of this information on the current and future expected cash flow for a firm and thereby adjusts the stock price with an immediate effect (Fama, 1970). Under the Efficient Market Hypothesis, a market index fund can obtain a rate of return similar to those by experts, and can be used for estimating expected stock return. The variance in stock returns across multiple events of the same nature can be explained by event-, firm-, and time-specific characteristics. There is a rich literature on the use of event studies for identifying the causal impact of important firm-specific decisions and events (e.g., Geyskens et al., 2002;

Gielens et al., 2008; Kalaigianam, Kushwaha, Steenkamp, & Tuli, 2013).

To identify the effect of marketing capabilities, psychic distance and the crisis itself, we use an unbalanced panel specification. In this specification, the panel is structured at the level of the 'firm–host country.' Thus, model identification comes from situations where a crisis impacts multiple firms or multiple companies at the same time. For example, a marketing crisis that embroils a firm (e.g., BP), can be located in multiple host countries (e.g., the US and India) and will enter the data as two observations (e.g., BP-US and BP-India). Time series variation is achieved by recording multiple events for these cross-sectional units. Since BP is a British firm, psychic distance for the two cross-sectional units is calculated for GB-US and GB-India home–host-country combinations. In other parts of the data, each marketing crisis can impact multiple firms. In another example, in 2011 Unilever and P&G were accused of price fixing laundry detergent in France, among other countries. Thus, a marketing crisis in a particular country (e.g., France) that impacts two firms (e.g., P&G and Unilever), will enter the panel as two observations (e.g., P&G-France and Unilever-France). Since P&G and Unilever are headquartered in the US and Great Britain, respectively, the psychic distance for these two cross-sectional units will be US-FR and GB-FR.

Data Sources

The data for this study is carefully collected from eight separate secondary sources (RepRisk AG, Bloomberg, COMPUSTAT Global, Osiris, International Organization for Standardization, World Value Survey, World Economic Forum, World Bank).

Event data

In the first stage, we obtain information on marketing crises from RepRisk AG, a Swiss risk management firm. RepRisk globally tracks publicly listed and non-listed companies on a range of business crises. The firm uses a three-step process in collecting and managing this database.² In the first step, proprietary search algorithms scrape daily data across media sources, including general news outlets, newsletters, websites of Non-Governmental Organizations, governmental agencies, blogs, and social media in 14 different languages. In the second step, RepRisk uses trained analysts to select and classify significant events. Each significant event is classified based on the number of countries

affected, company (or companies) embroiled in the issue, the earliest date to which these issues are traced, the severity of the crisis, and reach/importance of the media in which the events are covered. The severity of the crisis is rated on a scale of 1 (low) to 3 (high) based on RepRisk's experts' judgment of the harshness of the media reports describing the crisis. The reach of the media in which the crisis is reported are rated on a scale of 1 (low) to 3 (high). For example, major news outlets such as the BBC or *Wall Street Journal* are classified as a 3 while independent watchdog reports are classified as 1. In the third step, selected and cataloged data are once more verified by an independent senior analyst for accuracy. Incorrect data are either appropriately modified or discarded. The data spans from April 2006, when RepRisk first created this database, through February 2013.

The data only pertains to marketing crises related to marketing mix activities, which includes unsafe and controversial products, misleading advertising, unethical marketing practices, price fixing, anti-competitive actions. In particular, firms in the sample suffer crises related to pricing (e.g., P&G and Unilever), promotions (e.g., Volkswagen), product (e.g., Beijing New Building material, Bayer), and distribution (e.g., McDonald's, Yum Brands). Web Appendix A provides illustrative examples of these crises in order to describe the richness of the dataset across the marketing mix. As the examples show, there is a large amount of variation in type and geographic location. In addition, this table shows examples of overseas crises in both developed and developing economies, as well as firms whose home country is located in these economies.

Data for stock prices and market indices

In the second stage, we collect international equity data to determine changes in shareholder value, and hence abnormal returns. The event study method used to test the hypotheses requires firms to be publicly listed. Determining changes in firm-level shareholder value requires calibration of a country-specific capital asset pricing model and therefore relies on continuous daily stock price data for a significant time period. Consistent with this liquidity requirement we only retain publicly listed firms with at least 1 year of continuous stock price data prior to an event. Additionally, because this conceptualization requires a link to the home country, we only retain firms that trade on the premier stock exchange in their home country. We

only use stock exchanges that are members of the World Federation of Exchanges (WFE).³ Restricting the sample to firms on WFE exchanges ensures that selected stock markets are efficient, and that selected firms are both large and important enough to be listed on the premier stock exchanges in the respective countries. In addition, we exclude all cross-listed equities. For example, while BP has a primary listing on the London Stock Exchange, it is also traded on the New York Stock Exchange and Frankfurt Stock Exchange. In this instance we only retain BP's listing in its home country, i.e., the London Stock Exchange in Great Britain. We exclude the listings on the New York and Frankfurt exchanges.

Bloomberg Professional Service was used to collect daily stock prices, at the ISIN level, of all publicly traded firms, market indices for the top stock exchanges for countries in the sample, and all country-level risk-free rates. Details on market indices used for each stock exchange are reported in Web Appendix B.

Data for firm-specific measures

The third stage of the process involves collecting annual accounting statements from all publicly listed firms from their home country. This data was accessed from COMPUSTAT Global through Wharton Research Data Services, and Osiris, through Bureau van Dijk. This data was used for measuring marketing capabilities and other firm-specific controls.

Data for country-specific measures

In the fourth stage, we collect time-varying data on home- and host-country institutional factors from several disaggregate sources: Annual Global Competitiveness Reports from World Economic Forum,⁴ International Organization for Standardization, and Wave 5 (2005–2009) and Wave 6 (2010–2014) of World Value Survey and Douglas Dow's website (<https://sites.google.com/site/ddowresearch/home/scales>).⁵

Data Characteristics

The multi-source data collection and multi-step data cleaning process results in a short-list of 217 firms spanning 75 industries (at eight-digit GICS level) and 663 unique marketing crises. The complete data panel has 1451 observations formed by 814 unique cross-sectional units, i.e., combinations of firm and host country. On average, each cross-section has 1.8 observations. The multi-firm, multi-

event, multi-country nature of the data implies that this data does not suffer from the national effect of a single country (Brouthers et al., 2016). The data covers MNCs that trade in 19 home countries and face crises in 41 host countries. The countries in this sample represent over 90% of world's economy, and are listed in Table 1. In this table we also provide information on the number of firms from each home country and number of events occurring in each host country. Of all the potential 'home-host' country dyads, this data set covers 237 unique combinations.

Cumulative Abnormal Returns

Our metric for measuring the effect of a marketing crisis is change in shareholder value, which we operationalize with abnormal returns (AR). AR is the difference between expected and actual stock returns at the time of the marketing crisis. The informational impact of a marketing crisis is assessed by computing the difference between the observed return, R_{ijd} , for firm i traded in the premier stock exchange of country j on event day d , with the expected return $E(R_{ijd})$. The percentage change in stock price (observed return) is given by:

$$R_{ijd} = \left[\frac{P_{ijd} - P_{ij,d-1}}{P_{ij,d-1}} \right] \quad (1)$$

where P_{ijd} is the closing stock price for firm i , traded on premier stock market of country j , on day d . The price P_{ijd} incorporates the long-term profit impact of the public marketing crisis on the day d . The expected return, $E(R_{ijd})$, is determined by using a country-specific market model. We note that Fama-French factors are only available for the American market, and are therefore not ideal for an international setting. The benchmark market model is given by:

$$R_{ijd} = rf_{jd} + \alpha_{jd} + \beta_{ij}(BR_{jd} - rf_{jd}) + \varepsilon_{ijd} \quad (2)$$

where BR_{jd} is the return of the benchmark market index in country j on day d , rf_{jd} is the risk-free interest rate in country j on day d , and ε are normally distributed random error with $E(\varepsilon) = 0$ and variance σ_ε^2 . The parameter estimates α and β are obtained by regressing $R_{ijd} - rf_{jd}$ on the risk-free benchmark market return.

We estimate the daily stock returns for each firm between 365 and 30 calendar days prior to the event day using this country-specific market model. For any crisis which occurs to firm i , based in

country j on day d , we estimate the total abnormal return, AR_{ijd} , to be the difference between the observed and expected returns:

$$\begin{aligned} AR_{ijd} &= R_{ijd} - E(R_{ijd}) \\ &= R_{ijd} - \left(rf_{jd} + \hat{\alpha}_{jd} + \hat{\beta}_{ij}(BR_{jd} - rf_{jd}) \right) \end{aligned} \quad (3)$$

In a multi-country context, the choice of event window depends on four factors. First, we observe the date of the event but not the exact time. Thus, if an event occurs after the closing of stock market on 'Day 0' the change in stock prices are only observed on 'Day 1'. Second, the time difference between the home and host countries creates situations where event windows are asynchronous across different country combinations. Third, the exchanges in each country follow different holiday and weekend schedules. Fourth, information leakage and speed of dissemination can vary across events and home-host-country combination. For these reasons the AR for a firm i in home country j is aggregated over the 'event period' $[-d_1, d_2]$.

$$CAR_{ij(-d_1,d_2)} = \sum_{d=d_1}^{d_2} AR_{ijd} \quad (4)$$

While a large event window permits aggregation of effect, it also introduces more noise into the window surrounding the event, thereby muting the likelihood of observing the impact of the event itself and reducing total model fit (Kothari & Warner, 2007). Consistent with previous research in marketing (Geyskens et al., 2002), we treat this as an empirical issue. We can examine the average CAR across alternative windows to determine which event window best captures the impact of the crisis. Specifically, we can assess the significance of the standardized average CAR across multiple event windows using a cross-sectional variance-adjusted Patell test, to determine the most significant value (Kalaigianam et al., 2013).

Psychic Distance

Inspired by Dow & Karunaratna, (2006) and Berry et al., (2010), we cast a wide net when operationalizing psychic distance. In Ghemawat's (2001) view, distance is comprised of cultural, administrative, geographic, and economic (CAGE) facets. Based on this conceptualization, we created a measure of psychic distance that uses secondary data on 28 country characteristics, including 13 cultural

Table 1 List of home and host countries in sample

Home countries	Firm count ^a	Host countries	Event count ^b
Brazil	9	Argentina	32
Canada	7	Australia	30
China	7	Brazil	67
Germany	28	Bulgaria	19
Great Britain	20	Canada	56
Hong Kong	4	Chile	12
India	18	China	87
Indonesia	1	Colombia	15
Malaysia	7	Finland	5
Mexico	2	France	49
Norway	3	Germany	33
Peru	1	Great Britain	39
Philippines	1	Hong Kong	5
Poland	1	Hungary	10
South Africa	1	India	66
Taiwan	9	Indonesia	61
Thailand	1	Italy	17
Turkey	1	Japan	13
United States	96	Malaysia	11
		Mexico	24
		Morocco	5
		Netherlands	10
		New Zealand	10
		Norway	11
		Pakistan	9
		Peru	6
		Philippines	16
		Poland	10
		Romania	7
		Russia	18
		Slovenia	2
		South Africa	15
		South Korea	11
		Spain	17
		Sweden	10
		Taiwan	3
		Thailand	7
		Turkey	7
		United States	144
		Uruguay	7
		Vietnam	6

^a Home countries with a single firm are identified because these firms are involved in multiple crises and/or in multiple host markets. Thus, this creates multiple observations per firm.

^b Our data has 663 unique marketing crises but a given crises can affect multiple countries simultaneously. Therefore, the sum total of this column will be greater than 663.

stimuli, seven administrative stimuli, three geographic stimuli, and five economic stimuli.

Cultural distance stimuli

Cultural distance, as defined by Ghemawat, (2001), includes differences in social norms, language and religion. To capture differences in social norms we

use two seminal cultural frameworks. First, we include Hofstede’s, (2001) five dimensions – power distance, individualism, uncertainty avoidance, masculinity, and long-term orientation. Hofstede’s cultural framework is by far the most influential measure of cultural distance in IB (Tung & Verbeke, 2017; Beugelsdijk, Kostova, & Roth, 2017). However, Hofstede’s theory assumes that culture is static over time, and many of his country scores were collected around 50 years ago. Given dramatic changes that have appeared in many countries over this period, we also wanted to include a temporal aspect of culture, for which we turn to Inglehart’s work (Inglehart & Welzel, 2005). Inglehart’s framework consists of two dimensions. The first dimension contrasts a society’s traditional versus secular-rational values, while the second dimension contrasts survival versus self-expression values. This framework has been used in several recent studies (Steenkamp & de Jong, 2010; Steenkamp & Geyskens, 2012, 2014). Inglehart’s theory emphasizes cultural change over time, and these measures are regularly updated. The long time period of our data (2006–2013) allows for use of multiple waves of data.

To capture differences in language and religion, we turn to Dow & Karunaratna, (2006). These authors use a family-branch classification of language, which is turned into three measures. The first measure, L1, is the distance between the primary languages in each country, based on their branch-level similarity. The second measure, L2, categorizes the proportion of the population in the home country that speaks the primary language of the host country. L3 is then a measure of the proportion of the population in the host country that speaks the primary language of the home country. Measures for distance of religion are calculated in a similar manner. R1 is the distance between the primary religion in each country, based on branch-level similarity. R2 and R3 are indicators that measure the proportion of the population in one country that belong to the same religion as a significant proportion of another country.

Administrative distance stimuli

Administrative distance is measured by seven components taken from the “Institutions Pillar” in the World Economic Forum’s Global Competitiveness Report. The World Economic Forum administers its Expert Opinion Survey annually to over 10,000 top business executives from over 130 countries. We

use five components that pertain to public institutions: (1) protection of property rights (protection in general, intellectual property rights), (2) ethics and corruption (diversion of public funds, ethical standards of politicians, irregular payments and bribes), (3) undue influence (judicial independence, favoritism shown by government officials), (4) government efficiency (wastefulness of spending, burden of regulation, efficiency of legal framework, transparency in decision making), and (5) security (terrorism, crime and violence, organized crime, police services). Two components refer to private institutions: (1) corporate ethics (ethical behavior in interactions with public officials, politicians, and other firms) and (2) accountability (auditing and reporting standards, efficacy of corporate boards, protection of minority shareholders' interest, investor protection).⁶

All items were scored on a seven-point scale with varying end labels, specific to the item in question. For example, under the component "undue influence," the item about judicial independence read: "In your country, to what extent is the judiciary independent from influences of members of government, citizens, or firms?," with end labels 1 = heavily influenced, 7 = entirely independent]. The second item tapping into undue influence read: "In your country, to what extent do government officials show favoritism to well-connected firms and individuals when deciding upon policies and contracts?" with end labels 1 = always show favoritism, 7 = never show favoritism. For all items, a high score always indicated stronger institutions.

Geographic distance stimuli

We measure geographic distance using three inputs. The most natural way to measure geographic distance is through changes in latitude and longitude, both of which we include. Marketing crises requires a quick and effective response, and intensive communications within the firm. However, time-zone differences may also increase coordination difficulties (Hutzschenreuter et al., 2014). Therefore, we also include the difference in time zones between the capital cities of the home and host country (Dow & Karunaratna, 2006).

Economic distance stimuli

We measure economic distance using five components from the same Global Competitiveness Report. All components use a seven-point scale where a higher score corresponds to superior performance on the underlying attribute. Each

component is based on more detailed facets, which are partially based on hard data and otherwise on survey responses. The first component is the stability of the macroeconomic environment, which is based on such elements as government budget balance, savings rate, inflation, government debt, and the country's credit rating. Second, efficiency of the goods market in the country. This encompasses domestic competition, trade barriers, customer orientation of companies in the country, and buyer sophistication. The third factor is labor market efficiency, and includes flexibility of the labor market and efficient use of local talent. These factors are critical for ensuring that workers are allocated to their most efficient use in the economy and provided with incentives to give their best effort in their jobs. Fourth, we include market size, which is based on the size of the domestic market and the value of exports of goods and services. The fifth factor is sophistication of the local business environment. Key aspects are quality and quantity of local suppliers, value chain breadth, and extent to which firms use sophisticated marketing tools and techniques.

Psychic distance

The Euclidean method is the most widely used way to measure distance in IB. However, Berry et al., (2010) argue that the Mahalanobis method is a better choice. They offer three reasons. First, various country characteristics often are highly correlated with one another. Second, the variance of variables can differ substantially. Third, country characteristics are often measured on a different scale. Euclidean distance assumes that the country characteristics are uncorrelated, have the same variance, and are measured on the same scale. Mahalanobis distance makes none of these assumptions. Therefore, we use Mahalanobis distance for calculating psychic distance (PD):

$$PD_{xy} = \sqrt{(x_t - y_t)'S^{-1}(x_t - y_t)} \quad (5)$$

where x refers to the host country, y to the home country, and t to year (2006–2013), S is the 28×28 covariance matrix between the PD inputs, and $x_t (x_1, \dots, x_{28})_t$ is the vector of the host-country's scores on the PD inputs in year t and $y_t (y_1, \dots, y_{28})_t$ is the commensurate vector of the home country's scores. Table 2 provides an overview of the PD inputs and Table 3 shows the psychic distance for all 'Home-Host' dyads involving the countries in our sample.⁷ As expected, combinations such as the

United States–Canada, the Germany–Netherlands and Mexico–Spain have low psychic distance. Similarly, combinations that have large geographic, cultural, administrative or economic differences, such as Brazil–Russia, Japan–South Africa or Norway–Guatemala, have high psychic distance.

Marketing Capabilities

Following Dutta, Narasimhan, & Rajiv, (1999), we operationalize marketing capabilities as the ability of the firm to effectively convert marketing expenses (input) into sales (output). This approach is rooted in production economics and measures technical efficiency, i.e., how efficiently a firm is able to convert production factors inputs into desired outputs. This approach also permits us to benchmark and measure marketing capabilities of a firm with reference to its competitors in the industry, a fundamental cornerstone of the RBV (Barney, 1991).

We obtain data on marketing expenses from Osiris (a subset of Bureau van Dijk). The two subcategories that best represent global marketing investments are Sales and Distribution Expenses, and Advertising Expenses. We combine these two values into a composite measure of global marketing expenses (GLOBALMKTEXPENSES). Our outcome variable is global sales.

This marketing capabilities measure has several attractive qualities. First, it is benchmarked to a firm’s industry. Second, the measure systematically varies across countries. Third, it can vary over time. Thus the marketing capabilities of firms in the sample are benchmarked to the entire universe of publicly traded peers in the same industry of the same host country. Web Appendix C provides further details.

Control Variables

Firm size is defined as the log of the total assets, taken from COMPUSTAT Global. Return on assets and financial leverage are calculated as (net income)/(total assets) and (total liabilities)/(shareholder equity), respectively; both values are sourced from COMPUSTAT Global. Severity of the event and media coverage of the event in the host country are expert ratings on a three-point scale from low (1) to high (3) provided by RepRisk, which also provides information on the number of countries that were involved with the crisis. Table 4 summarizes the measurement of the key variables. Summary statistics are presented in Table 5.

Model Specification

To test the effects of psychic distance and marketing capabilities on the performance consequences of a marketing crisis, we regress the CAR associated with a marketing crisis on the set of substantive predictors and control variables. The CAR accrued by firm *i* belonging to industry *k* being traded in the premier stock exchange of the home country *j* when the marketing crisis *m* has occurred in host country *j*’ in year *t* can be modeled as:

$$\begin{aligned}
 CAR_{ikj'_{mt}}[-d_1, d_2] = & \theta_0 + \theta_1 PD_{jj't} + \theta_2 PDSQ_{jj't} \\
 & + \theta_3 MC_{ijk,t-1} + \theta_4 PD_{jj't} \times MC_{ijk,t-1} \\
 & + \theta_5 PDSQ_{jj't} \times MC_{ijk,t-1} \\
 & + \theta_6 ROA_{ijt} + \theta_8 SIZE_{ijt} + \theta_7 LVRG_{ijt} \\
 & + \theta_9 REACH_{mt} + \theta_{10} SEVERE_{mt} \\
 & + \theta_{11} COUNT_{imt} + \sum_l \theta_l YEAR_{lmt} \\
 & + \sum_l \theta_l HOSTCOUNTRY_{jl} \\
 & + \sum_l \theta_l HOMECOUNTRY_{lj'} \\
 & + \sum_l \theta_l FIRM_{lik} \\
 & + \lambda_{ijj'} + \xi_{ikj'_{mt}}
 \end{aligned}
 \tag{6}$$

The hypothesized inverted-U effect of psychic distance is captured through the linear and the quadratic terms (PD and PDSQ). To ensure temporal separation between marketing capabilities (MC) and impact of event we use 1 year lagged marketing capabilities of the firm. The moderating impact of marketing capabilities on the non-linear relationship between psychic distance and CAR is captured by linear (PD * MC) and quadratic (PDSQ * MC) interaction terms.

Controlling for Heterogeneity

Any empirical model needs to control for (unobserved) heterogeneity. Ideally, we would have direct measures of these various sources of heterogeneity but the breadth of our data in terms of number of firms, host, and home countries, and the length of the time period makes this virtually impossible. There is a tradeoff between depth (e.g., one home company across multiple host countries) and breadth. However, failure to control for heterogeneity may lead to biased parameter estimates. Therefore, next to adding several observed covariates, we controlled for any

**Table 2** Psychic distance inputs

Dimension	Definition of input	Response scale	Source
Cultural Index	Hofstede dimensions: Power distance Individualism versus collectivism Uncertainty avoidance Masculinity versus femininity Long-term orientation versus short-term orientation	All dimensions measured on (approximately) 0–100	hofstede-insights.com
	Inglehart dimensions: <i>Traditional versus secular-rational</i> <i>Survival versus self-expression</i>	Both dimensions measured on (approximately) [– 2, + 2]	worldvaluessurvey.org/
	Language classification: L1: distance between major languages L2: incidence of county <i>i</i> 's major language(s) in country <i>j</i> L3: incidence of county <i>j</i> 's major language(s) in country <i>i</i>	L1–L3 measured on five-point scale detailed in Dow and Karunaratna (2006, Appendix A)	sites.google.com/site/ddowresearch
	Religion classification: R1: distance between major religions R2: incidence of county <i>i</i> 's major religion(s) in country <i>j</i> R3: incidence of county <i>j</i> 's major religion(s) in country <i>i</i>	R1–R3 measured on five-point scale detailed in Dow and Karunaratna (2006, Appendix A)	sites.google.com/site/ddowresearch
Administrative Index	Measured by the “institution” factors in the Global Competitiveness Report Components related to public institutions: <i>Property rights</i> <i>Ethics and corruption</i> <i>Undue influence</i> <i>Government efficiency</i> <i>Security</i> Components related to private institutions: <i>Corporate ethics</i> <i>Accountability</i>	All inputs measured on a 1 to 7-point scale	World Economic Forum
Geographic Index	Time-invariant components to the capital city of each country: Time zone Latitude Longitude	Time zone is the number of time zones between capital cities, latitude and longitude measured using standard geographic measures	International Organization for Standardization
Economic Index	Measured by the “economic” environment factors in the Global Competitiveness Report <i>Macroeconomic environment</i> <i>Efficiency of goods market</i> <i>Efficiency of labor market</i> <i>Market size</i> <i>Business sophistication</i>	All inputs measured on a 1 to 7-point scale	World Economic Forum

Note: Time-varying inputs are italicized.

remaining unobserved heterogeneity with fixed-effects dummies (Greene, 2010). Equation 6 is an unbalanced panel data specification where the cross-sectional unit is defined as the firm–host country (i.e., ij') combination and temporal

variation is observed over multiple events (i.e., m).⁸ The repeated nature of the observations allows us to control for various forms of unobserved heterogeneity stemming from the firm, countries involved, and crisis characteristics.

Table 3 Psychic distance for all home–host dyads in sample

	Home countries																		
	BR	CA	CN	DE	GB	HK	ID	IN	MX	MY	NO	PE	PH	PL	TH	TR	TW	US	ZA
<i>Host countries</i>																			
AR	7.70	8.09	8.24	7.62	7.82	8.50	7.42	7.67	7.82	7.91	7.43	7.51	7.80	7.94	7.97	7.72	8.03	7.91	8.55
AU	7.76	7.47	7.76	7.39	7.40	7.22	7.39	7.38	7.35	7.67	6.64	7.55	6.64	6.85	6.76	7.52	7.79	7.29	7.47
BG	7.81	7.84	7.65	7.69	7.22	7.87	7.81	8.00	6.75	7.41	6.91	6.50	7.15	7.36	7.70	7.52	7.07	7.91	7.76
BR	0	7.51	7.90	7.87	7.38	7.91	7.14	7.46	7.69	7.63	7.51	6.66	7.53	7.08	7.25	8.13	8.30	8.26	7.85
CA	7.51	0	8.03	7.54	6.02	7.22	7.75	6.95	6.54	7.75	6.88	6.91	7.45	6.86	7.49	7.70	7.42	7.80	8.35
CL	7.54	7.11	8.02	6.72	7.07	7.46	7.15	7.54	7.23	7.39	7.44	6.52	7.72	6.95	7.14	7.35	7.10	7.79	7.61
CN	7.90	8.03	0	7.67	7.14	7.49	7.83	7.71	7.38	8.12	7.62	7.89	8.13	7.66	7.80	7.96	8.19	8.35	8.09
CO	6.89	6.80	7.47	6.77	6.44	6.59	6.76	7.39	5.59	7.24	6.35	6.12	6.52	6.60	6.59	6.44	7.23	7.22	6.90
DE	7.87	7.54	7.67	0	7.23	7.33	7.01	7.18	7.42	7.99	6.95	7.72	7.44	6.92	8.17	7.47	7.36	8.07	7.89
ES	7.31	7.15	7.80	7.40	6.96	7.29	7.70	7.28	7.21	7.75	6.73	6.47	7.03	7.02	7.58	7.89	7.00	7.89	7.41
FI	7.67	7.80	8.30	7.49	6.37	7.96	7.28	8.29	7.34	7.43	6.30	7.76	7.52	7.41	7.37	7.29	7.59	8.33	8.15
FR	6.98	6.78	7.95	7.34	6.62	7.38	7.19	6.77	6.20	6.80	6.69	7.36	7.09	7.35	7.58	6.43	7.02	7.35	7.27
GB	7.38	6.02	7.14	7.23	0	7.75	6.97	6.80	6.63	7.03	6.92	6.62	6.58	6.70	7.59	7.09	7.00	6.27	7.13
HK	7.91	7.22	7.49	7.33	7.75	0	6.84	8.04	7.72	6.98	7.36	7.00	7.42	7.27	7.89	7.53	7.67	7.91	8.22
HU	7.86	7.64	8.56	7.72	7.18	7.45	7.13	7.87	7.15	8.10	7.46	7.60	7.92	6.80	7.77	7.77	7.98	8.21	7.75
ID	7.14	7.75	7.83	7.01	6.97	6.84	0	6.92	6.96	6.82	6.83	6.69	6.88	6.94	6.99	6.97	6.71	7.63	7.49
IN	7.46	6.95	7.71	7.18	6.80	8.04	6.92	0	7.08	7.59	7.11	7.41	6.88	7.48	6.80	7.69	7.03	8.18	7.72
IT	7.24	7.67	7.85	6.89	6.65	7.85	7.29	7.79	7.51	7.79	7.26	6.86	7.01	6.43	7.71	6.96	7.22	8.04	7.68
JP	7.91	8.16	8.21	7.47	7.04	7.95	8.11	7.61	7.91	7.62	7.81	7.61	8.13	7.33	7.30	8.01	7.26	8.37	8.47
KR	7.51	7.77	7.42	7.83	6.99	7.90	7.17	8.33	7.60	8.07	7.93	7.19	7.20	7.59	7.28	7.33	7.07	8.27	8.40
MA	8.25	7.43	7.62	8.07	7.40	7.89	7.73	7.11	7.96	7.46	7.52	6.85	7.18	7.10	7.50	6.72	7.64	8.13	8.00
MX	7.69	6.54	7.38	7.42	6.63	7.72	6.96	7.08	0	7.34	7.18	6.75	6.96	6.95	7.26	6.86	7.59	8.25	7.80
MY	7.63	7.75	8.12	7.99	7.03	6.98	6.82	7.59	7.34	0	7.51	7.34	6.54	7.03	7.47	7.60	7.57	7.99	7.70
NL	6.81	7.03	8.15	6.49	6.70	7.23	6.78	7.08	6.93	6.75	6.44	6.67	7.51	6.59	7.06	6.84	7.20	7.50	7.49
NO	7.51	6.88	7.62	6.95	6.92	7.36	6.83	7.11	7.18	7.51	0	6.81	7.35	6.38	6.39	7.73	6.91	7.73	7.67
NZ	8.00	7.39	8.11	7.85	6.14	7.51	7.35	7.61	7.83	7.85	7.26	6.90	7.16	6.97	7.49	7.41	7.52	8.63	7.62
PE	6.66	6.91	7.89	7.72	6.62	7.00	6.69	7.41	6.75	7.34	6.81	0	7.28	6.64	6.96	7.23	6.75	7.52	7.33
PH	7.53	7.45	8.13	7.44	6.58	7.42	6.88	6.88	6.96	6.54	7.35	7.28	0	7.17	7.79	7.91	7.63	8.11	7.93
PK	8.15	7.54	8.48	7.75	7.50	7.92	7.22	7.62	7.98	8.25	7.56	7.58	7.69	7.57	7.74	7.21	8.15	8.32	8.27
PL	7.08	6.86	7.66	6.92	6.70	7.27	6.94	7.48	6.95	7.03	6.38	6.64	7.17	0	6.66	6.78	7.69	7.60	8.14
RO	7.28	7.69	7.33	7.18	6.62	7.96	7.33	7.11	7.35	7.02	6.67	7.16	6.97	5.85	7.03	7.12	7.50	7.72	7.73
RU	8.58	8.19	8.39	8.22	7.36	8.35	7.30	7.91	8.30	8.48	7.67	7.50	7.57	7.31	8.09	8.05	8.32	8.53	8.35
SE	7.61	7.43	7.29	7.39	6.35	7.37	7.11	7.13	7.32	7.51	5.58	6.69	7.15	7.49	7.30	7.00	7.95	7.86	7.56
SI	7.74	7.44	8.09	7.54	7.21	6.75	7.34	7.16	7.27	7.47	6.45	6.94	6.61	6.87	6.84	7.13	7.04	7.61	7.98
TH	7.25	7.49	7.80	8.17	7.59	7.89	6.99	6.80	7.26	7.47	6.39	6.96	7.79	6.66	0	6.83	7.39	7.69	7.66
TR	8.13	7.70	7.96	7.47	7.09	7.53	6.97	7.69	6.86	7.60	7.73	7.23	7.91	6.78	6.83	0	7.63	7.83	7.69
TW	8.30	7.42	8.19	7.36	7.00	7.67	6.71	7.03	7.59	7.57	6.91	6.75	7.63	7.69	7.39	7.63	0	7.97	7.76
US	8.26	7.80	8.35	8.07	6.27	7.91	7.63	8.18	8.25	7.99	7.73	7.52	8.11	7.60	7.69	7.83	7.97	0	8.31
UY	7.61	7.77	7.96	8.07	7.25	8.06	7.26	7.77	7.18	7.66	7.30	7.18	8.10	7.43	8.30	7.70	7.83	8.31	8.19
VN	7.68	7.70	7.75	8.25	6.73	7.69	7.27	7.54	7.86	7.48	7.24	7.73	7.73	7.73	7.40	7.41	7.15	8.29	8.51
ZA	7.85	8.35	8.09	7.89	7.13	8.22	7.49	7.72	7.80	7.70	7.67	7.33	7.93	8.14	7.66	7.69	7.76	8.31	0

Note: These are averaged across 6-year data window in our sample.

AR Argentina, AU Australia, BG Bulgaria, BR Brazil, CA Canada, CL Chile, CN China, CO Colombia, DE Germany, ES Spain, FI Finland, FR France, GB Great Britain, HK Hong Kong, HU Hungary, ID Indonesia, IN India, IT Italy, JP Japan, KR South Korea, MA Morocco, MX Mexico, MY Malaysia, NL Netherlands, NO Norway, NZ New Zealand, PE Peru, PH Philippines, PK Pakistan, PL Poland, RO Romania, RU Russia, SE Sweden, SI Slovenia, TH Thailand, TR Turkey, TW Taiwan, US United States, UY Uruguay, VN Vietnam, ZA South Africa.

Firm-specific heterogeneity

We include three firm-specific, time-varying financial characteristics as covariates: return on assets (ROA), financial leverage (LVRG), and firm size (SIZE). However, it is unlikely that these three

variables capture all firm-specific heterogeneity. One particular important unobserved variable (at least in our data) is international experience. Experiential knowledge of a firm in a particular foreign market may be a key driver of its ability to

Table 4 Crisis, firm, and event data sources

Data type	Variable	Measure	Source
Crises data	Reach of media coverage ($REACH_{mt}$)	Rating on a scale of 1 (low) to 3 (high) on how widespread was the media coverage of the marketing crisis m in year t	RepRisk AG
	Severity of the crisis ($SEVERE_{mt}$)	Rating on a scale of 1 (low) to 3 (high) on the severity of the crisis based on the harshness of the press reports about the marketing crisis m in year t	RepRisk AG
	Number of countries ($COUNT_{imt}$)	The total number of countries that were involved with the crisis impacting firm i for the marketing crisis m in year t	RepRisk AG
Event study data	Stock price (P_{id})	The daily (d) stock price of firm i from the RepRisk data. Each firm is traded on a premier stock exchange in their home country and has at least 1 year of continuous daily stock price data (prior to event)	Bloomberg professional service
	Benchmark Market Index Return (BR_{jd})	Daily (d) return of the index with highest market capitalization in the country j	World federation of exchanges
	Risk-free rate (rf_{jd})	Daily risk-free rate for country j on day d	Bloomberg professional service
Firm-specific data	Marketing capability (MC_{ijkt})	Estimated using stochastic frontier estimation of a marketing production function with marketing expenses as inputs and sales as output	Osiris Bureau van Dijk
	Firm return on assets (ROA_{ijt})	ROA is calculated as net income divided by total assets for firm i and time t (%)	Compustat
	Firm leverage ($LVRG_{ijt}$)	Leverage refers to the debt ratio. That is, total debt to total equity	Compustat
	Firm size ($SIZE_{ijt}$)	Firm size is the log of the total assets of firm i at time t	Compustat

Table 5 Summary statistics and correlation between key variables

Variable name	Mean	SD	1	2	3	4	5	6	7	8
1 CAR[- 1, + 1]	- 0.0015	0.0002								
2 Psychic distance	7.6968	0.6341	0.03							
3 Marketing capabilities	0.2586	0.0621	- 0.03	- 0.03						
4 Return on assets (%)	10.2417	9.2092	0.07	0.05	- 0.10					
5 Leverage	1.5638	7.4667	0.05	- 0.03	- 0.07	0.01				
6 Firm size	16.9712	1.6121	0.01	- 0.03	- 0.17	0.10	- 0.07			
7 Reach of media	1.6003	0.6149	0.05	0.03	0.03	- 0.05	0.10	- 0.03		
8 Severity of crisis	1.6561	0.5927	- 0.05	0.03	- 0.03	- 0.04	- 0.13	0.05	- 0.19	
9 Number of countries	6.5389	7.6624	- 0.11	- 0.04	0.09	- 0.11	- 0.08	- 0.21	- 0.24	0.32

Note: The correlations should be interpreted with caution as they confound cross-sectional and temporal variation in data.

effectively operate in that market (e.g., Reuber & Fischer, 1997). Ideally, we would have a direct measure for experiential knowledge but this proved impossible given the breadth of our data, involving 246 firms from 19 countries. However, we control for foreign experience and any other unobserved firm-specific heterogeneity by including a separate fixed effect dummy (FIRM) for each firm.

Country-specific heterogeneity

Multiple observations for each home and host country enable us to control for unobserved country-specific characteristics by including HOME-COUNTRY and HOSTCOUNTRY fixed effects.⁹ The home country dummies control for factors such as

regulations governing the firms, stock market idiosyncrasies, heterogeneous investor expectations across countries, and social norms governing business conduct. The host-country dummies account for issues such as regulations governing foreign firms, political climate, freedom of press, cultural acceptance of foreign firms, and market attractiveness.

Crisis-specific heterogeneity

Arguably, events with greater negative coverage, or events affecting a firm in important foreign markets, will be more severe and will be covered by more mainstream media, thereby evoking a stronger stock market reaction. Thus, we control for

characteristics of the marketing crisis through the media channel which covers the crisis (REACH), the severity of the crisis (SEVERE), and the number of countries involved (COUNT).

Temporal heterogeneity

It is possible that there are worldwide macro-economic shocks that, at an annual level, may impact the results. Thus, we include a dummy variable for year (YEAR) to account for this time-specific variation.

Firm–host country heterogeneity

Finally, additional unobserved heterogeneity in cross-sectional units is captured using a normally distributed random effect (λ) at the firm–host country combination. This random effect controls for situations where a firms places different degrees of importance on different host markets (e.g., the Chinese market may be more important for General Motors than Ford), or that firms have different length of experience in a host country (e.g., General Motors has longer history in China than Ford) or that firms have made different levels of investment in these markets (e.g., General Motors has more expansive operation in China than Ford).¹⁰

Sample Selection

We recognize that firms in certain industries, or with specific characteristics, may be more (or less) likely to suffer from a marketing crisis. Such selection could result in biased parameter estimates. However, under the efficient market hypotheses, a fundamental thesis underlying the event study, this should not be a concern because the potential impact of crises should be priced into the current value of a stock. Nonetheless, we can directly address this question by adopting a conditional event study approach (Kalaignanam et al., 2013). Thus, we develop a two-stage Heckman selection model where the first stage estimates the probability of a firm encountering a marketing crisis as a function of lagged marketing capabilities of the firm, its crisis history, industry characteristics, host-country characteristics, and time-specific effects. We then compute the Inverse Mills Ratio (IMR) and add it to our focal model to control for the selection bias of the crisis. As expected, we find that the model including sample selection is not materially different from the models without the selection control. Full details of selection model and estimates of second-stage model with selection control are available in Web Appendix D.

RESULTS

Impact of Marketing Crisis in Overseas Markets

A cross-sectional variance-adjusted Patell test statistic will demonstrate significance of the standardized abnormal return in several alternate event windows from $[-1, +1]$ through $[-1, +3]$ (Gielens et al., 2008) (see Table 6). This test indicates the most appropriate event window is $[-1, +1]$, which is the window chosen as the dependent variable in Eq. 6. The average impact of a marketing crisis in an overseas market on shareholder value over the $[1, +1]$ window, i.e., cumulative average abnormal return, CAAR $[-1,+1]$ amounts to -0.15% ($p = 0.03$). This result supports H1, that firms embroiled in overseas marketing crises will suffer a decline in shareholder value. We test robustness of these results with $[-1, +3]$ window, which provide a less significant result, likely due to the increase in noise with larger window (Kothari & Warner, 2007).

The Curvilinear Effect of Psychic Distance

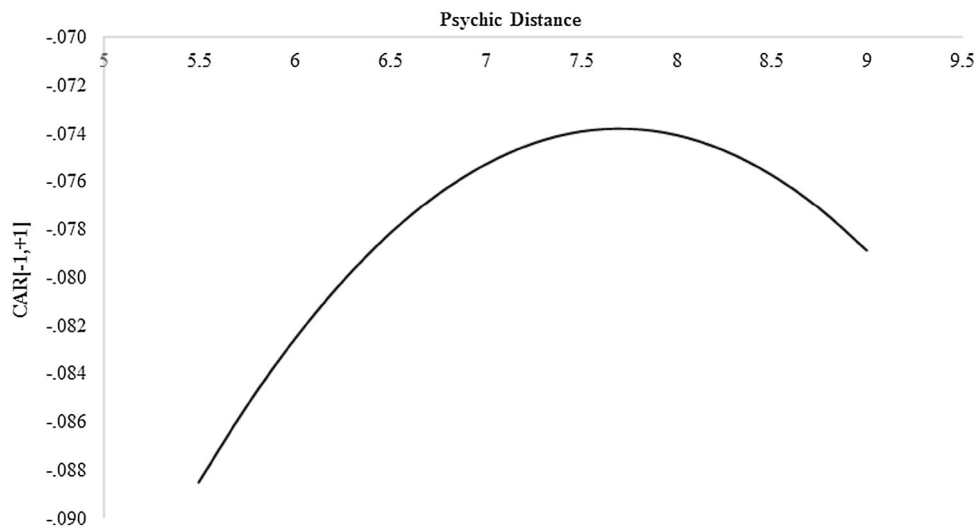
The results for nested models are presented in Table 7. In the first model, M1, we regress CAR $[-1, +1]$ only on the control variables. This provides the baseline against which our focal model is tested. We start by adding only the linear effect of psychic distance, which has been the focus of previous research in IB (Model M2). Model fit improves significantly ($\Delta\chi^2_{(1)} = 4.12$; $p < 0.05$). The linear term of psychic distance is positive and marginally significant ($\theta_1 = 0.0024$; $p < 0.10$). The positive effect means that the adverse effect of a marketing crisis on shareholder value is less severe in highly dissimilar markets. This supports the psychic distance paradox. Next, we add the quadratic term of psychic distance (Model M3). Interestingly, model fit improves considerably more ($\Delta\chi^2_{(1)} = 8.71$; $p < 0.01$). Both the linear and the quadratic term of psychic distance are significant:

Table 6 Average cumulative abnormal return across different event windows

Event window	Average cumulative abnormal return (%)	SD	p value
CAAR $[-1, +1]$	- 0.1502	0.0207	0.03
CAAR $[-1, +2]$	- 0.0612	0.0246	0.45
CAAR $[-1, +3]$	- 0.1318	0.0247	0.10

Table 7 Hypotheses testing

Dependent variable: CAR[- 1, + 1]	Controls only M1		M1 + linear effect of psychic distance M2		M2 + quadratic effect of psychic distance M3		M3 + marketing capabilities M4	
	θ (SE)	<i>p</i> value	θ (SE)	<i>p</i> value	θ (SE)	<i>p</i> value	θ (SE)	<i>p</i> value
<i>Hypothesized variables</i>								
Psychic distance (PD) (θ_1)			0.0024 0.0014	0.09	0.0467 (0.0191)	0.01	0.3042 (0.1080)	0.01
Psychic distance square (PDSQ) (θ_2)					- 0.0030 (0.0013)	0.02	- 0.0204 (0.0072)	0.01
Marketing capabilities (MC) (θ_3)							3.7376 (1.5824)	0.02
PD * MC (θ_4)							- 1.0163 (0.4210)	0.02
PDSQ * MC (θ_5)							0.0684 (0.0279)	0.01
<i>Substantive control variables</i>								
Return on assets (ROA) (θ_6)	0.0002 (0.0002)	0.20	0.0002 (0.0002)	0.20	0.0002 (0.0002)	0.27	0.0002 (0.0002)	0.22
Financial leverage (LVRG) (θ_7)	- 0.0002 (0.0001)	0.04	- 0.0002 (0.0001)	0.04	- 0.0002 (0.0001)	0.04	- 0.0002 (0.0001)	0.04
Firm size (SIZE) (θ_8)	0.0090 (0.0053)	0.09	0.0093 (0.0053)	0.08	0.0093 (0.0053)	0.08	0.0099 (0.0053)	0.06
Reach of news (REACH) (θ_9)	0.0010 (0.0010)	0.33	0.0010 (0.0010)	0.33	0.0009 (0.0010)	0.37	0.0010 (0.0010)	0.34
Severity (SEVERE) (θ_{10})	- 0.0007 (0.0011)	0.50	- 0.0008 (0.0011)	0.48	- 0.0007 (0.0011)	0.52	- 0.0006 (0.0011)	0.56
Countries involved (COUNT) (θ_{11})	0.0000 (0.0001)	0.89	- 0.0000 (0.0001)	0.85	0.0000 (0.0001)	0.80	0.0000 (0.0001)	0.88
<i>Fixed and random effects</i>								
Firm, home and host country, and year dummies	Included		Included		Included		Included	
Firm-host country random effect	Included		Included		Included		Included	
χ^2 (no. of parameters)	868.48 (270)		872.60 (271)		881.31 (272)		892.61 (275)	
Change in model fit (<i>p</i> value)			4.12 (0.05)		8.71 (0.01)		11.30 (0.01)	

**Figure 2** Effect of psychic distance on shareholder value (based on M3).

$\theta_1 = 0.0467$ ($p < 0.01$) and $\theta_2 = - 0.0030$ ($p < 0.01$). The negative sign for the quadratic term indicates that the relationship between psychic distance and shareholder value follows an inverted-U. This supports an inverted-U relationship between psychic distance and shareholder value (H2). We plot this inverted-U relationship for the range of psychic distance observed in our data in Figure 2. The figure shows that the peak is within data range.

The Moderating Role of Marketing Capabilities

The full model, M4, examines the direct and moderating impact of marketing capabilities on psychic. This model again significantly improves fit (M4 over M3 $\Delta\chi^2_{(3)} = 11.30$, $p < 0.01$). This model shows that marketing capabilities moderate the impact of psychic distance on shareholder value. Notably, a positive coefficient for marketing capabilities ($\theta_3 = 3.7376$, $p = 0.02$) indicates that the higher the marketing capabilities of the firm, the

less negative the performance effect of marketing crises in overseas market. Next, the interaction between the linear term of psychic distance and marketing capabilities ($\theta_4 = - 1.0163$, $p < 0.05$) and the interaction between the quadratic term of psychic distance and marketing capabilities ($\theta_5 = 0.0684$, $p < 0.01$) are also significant.

These findings are plotted using surface plot in Figure 3, where we show effect of psychic distance over the observed range of marketing capabilities on shareholder value. The results indicate that the curvature of the inverted-U is flatter for firms with high marketing capabilities – indicating that high marketing capabilities dampen the effect of psychic distance. On the other hand, the curvature of psychic distance is more pronounced for firms with low marketing capabilities.

We further explore this by calculating the first-order partial derivative, also called gradient or “simple slope” – and its standard effort for psychic

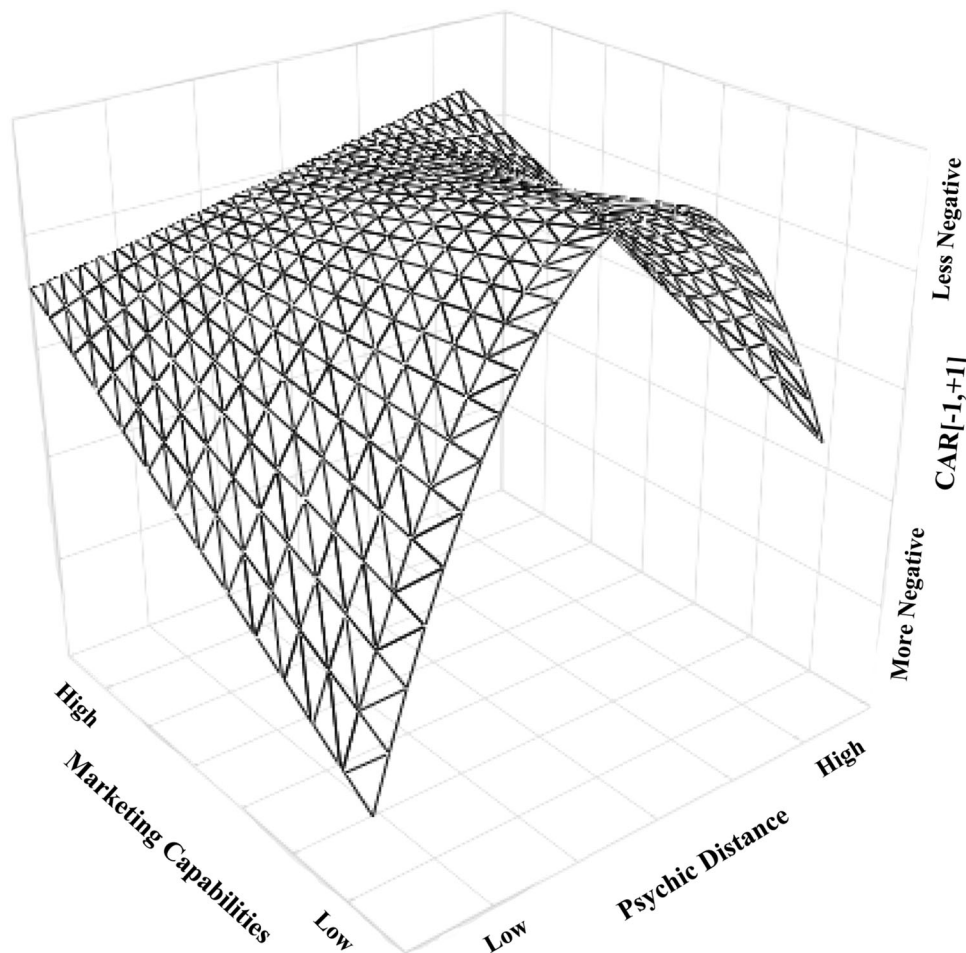


Figure 3 Effect of psychic distance for differing marketing capabilities (based on M4).

Table 8 Simple slope analyses of moderated nonlinear effect (based on M4)

Psychic distance	Low marketing capabilities firms			High marketing capabilities firms		
	Marginal effect on CAR [− 1, + 1]	SE	<i>p</i> value	Marginal effect on CAR [− 1, + 1]	SE	<i>p</i> value
5.0	0.0280	0.0079	0.00	0.0070	0.0074	0.35
5.5	0.0225	0.0063	0.00	0.0058	0.0059	0.33
6.0	0.0171	0.0048	0.00	0.0047	0.0045	0.29
6.5	0.0116	0.0033	0.00	0.0036	0.0031	0.24
7.0	0.0062	0.0021	0.00	0.0025	0.0019	0.19
7.5	0.0008	0.0016	0.65	0.0013	0.0015	0.38
8.0	− 0.0047	0.0025	0.07	0.0002	0.0024	0.94
8.5	− 0.0101	0.0039	0.01	− 0.0009	0.0037	0.80
9.0	− 0.0156	0.0054	0.00	− 0.0021	0.0052	0.69
9.5	− 0.0210	0.0070	0.00	− 0.0032	0.0067	0.63
10.0	− 0.0265	0.0085	0.00	− 0.0043	0.0082	0.60

Low and high marketing capabilities firms are defined at the 10th and 90th percentile values, respectively.

distance for firms with low versus high marketing capabilities (Table 8). The results suggest that for firms with high marketing capabilities, psychic distance has a minor and non-significant impact on CAR. However, for firms with low marketing capabilities, psychic distance has a pronounced, curvilinear effect on change in shareholder value. To get a sense of the magnitude of the difference, the effect of psychic distance on CAR at a very low level of psychic distance (5) is four times larger for firms with low marketing capabilities than for firms with high marketing capabilities. At the other end of the spectrum, at very high levels of psychic distance (9), the difference in effect is even larger: 7.5:1. Thus, H3 is supported.

Robustness Tests

We perform a series of robustness tests to evaluate the stability of the results as reported in Model M4. We report these results in Web Appendix E.

Alternate event window

The CAR is borderline significant at $p < 0.10$ for [− 1, + 3] window. As a robustness check, Eq. 5 is estimated for multiple other event windows. The results are presented in Model RT1 in Web Appendix E. The coefficients of linear and quadratic term of psychic distance, marketing capabilities, and their interaction terms remain in the hypothesized direction and significant.

Efficiency of stock markets

Despite the substantive results found for psychic distance, questions remain as to whether this negative effect on CAR is just a temporary reaction that is quickly corrected afterwards. The total average effect over the period − 1 to 1 (i.e.,

CAAR[− 1, 1]) is significant ($p < .05$). The only other effect, albeit weakly significant only is found for [− 1, + 3]. No significant effects were found after day +3. As such, our results suggest a rapid adjustment in shareholder value following the announcement. Following Geyskens, Gielens, & Dekimpe, (2002) and Gielens et al., (2008), we also computed two set of additional abnormal returns. First, we calculated abnormal returns cumulated from day + 2 onwards, for up to 100 trading days after the event, i.e., CAR_{*i*}[2, 2], CAR_{*i*}[2, 3], ..., CAR_{*i*}[2, 100]. A pooled regression against the number of trading days since the take-over announcement showed no significant drift ($p > .10$). We repeated this analysis, starting on day + 4 onwards, onwards, i.e., CAR_{*i*}[4, 4], CAR_{*i*}[4, 5], ..., CAR_{*i*}[4, 100]. Again, the series showed no significant drift. These findings indicate that the initial negative evaluation was not just a short-run drop that was corrected in the subsequent weeks. The short event window and the insignificance of the subsequent drift are in line with the presumed efficiency of the stock markets (Kothari & Warner, 2007).

Sensitivity to outliers

We test the sensitivity of the results to outliers on abnormal returns. The largest potential offender in our data set is Monsanto (see Web Appendix F). As shown in Model RT2 in Web Appendix E, the results are again consistent after removing Monsanto from our analyses.

Non-US firms

As the world's dominant economic power, the United States is the home country for many MNCs. In our sample, 52% of all crises affect US MNCs.

This could mean that perhaps the effect of psychic distance is confounded with a US-specific effect. Although we control for both home and host-country fixed effects, we do consider if non-American crises have different effects, by estimating a model in which we added a dummy for country of origin of the firm (non-US vs. US) and interactions between the six substantive terms in our model and country of origin. None of the terms involving country of origin was significant (all p 's > 0.50).

Impact of individual psychic distance dimensions

Our psychic distance index is motivated by the CAGE framework (Ghemawat, 2001). However, it may be possible that certain distance factors have more importance than others. Therefore, we create four individual distance measures, namely cultural, administrative, geographic, and economic, between home–host-country dyads, using the Mahalanobis distance of their respective inputs, and re-estimate model M3 for each CAGE dimension separately. The results of these analyses are shown in Web Appendix G. We find that our results are most strongly driven by economic and administrative distance. We find weak evidence for an inverted-U relationship of geographic distance (the sign of the parameters is in the anticipated direction but significance levels are low), while we find no effect of cultural distance.

DISCUSSION

In this paper, we examined the effect of psychic distance between home and host country on the performance of MNCs in overseas markets in the wake of a marketing crisis. We introduce marketing capabilities as a moderator of the effect of psychic distance. The measure of performance, shareholder value, is recognized as an important metric for evaluating the effect of marketing events (e.g., Gielens et al., 2008). The hypotheses are tested on a carefully assembled set of 1451 observations representing 663 crises faced by 217 publicly traded firms in 75 industries, involving 19 home countries and 41 host countries.

Our work makes two contributions to the IB literature. First, most previous research on the relation between psychic distance and firm performance specifies a linear effect, with contradictory empirical results (Evans et al., 2008). We present a conceptual framework for integrating the contradictory effects of psychic distance on firm performance proposed by the Uppsala School of thought

and the psychic distance paradox. While we do not test the factors underlying the inverted U (i.e., anticipation and adaptation), we use them to propose that the effect of psychic distance on firm performance takes the form of an inverted U. We find empirical support for this relationship. When we compare the linear psychic distance model and the quadratic psychic distance model, we find that the quadratic model is superior in terms of statistical significance and magnitude of the effects. For comparison, we calculated the effect size r for psychic distance in the two models. For the linear model, the effect size is a decidedly modest 0.049. This effect size is very close in absolute magnitude to the average linear effect size of psychic distance of -0.035 reported in Tihanyi et al., (2005) meta-analysis. For the quadratic model, the total effect size of psychic distance is a more substantial 0.138.¹¹ Thus, ignoring the curvature in the effect of psychic distance may lead to an underestimation of the importance of psychic distance by two-thirds.

Our second contribution is that we introduce marketing capabilities as a moderating factor, dampening (high marketing capabilities) or sharpening (low marketing capabilities) the effect of psychic distance. In this, we respond to Zaheer et al., (2012:18) call to investigate how firm-level characteristics moderate the effects of distance. We find that the effect of psychic distance on firm performance varies systematically across the firm characteristic marketing capabilities. Failure to include this leads to a substantial underestimation of the significance of psychic distance in affecting firm performance. Indeed, the combined effect size of the four terms involved in psychic distance is .313. This is a substantial effect by any standard, and six times as large as the simple linear effect of psychic distance.

Managerial Implications

We can be confident that no MNC in our sample wanted a marketing crisis in their overseas markets. This illustrates that marketing crises will happen, no matter how extensive the quality assurance and control systems of the MNC. However, being mindful of the role psychic distance plays in the fallout following a crisis can enable a MNC to proactively develop strategies that mitigate their negative effects. Contrary to claims that have appeared in the literature (e.g., Ellis, 2008), globalization has not rendered psychic distance meaningless. Our findings indicate that the MNC's marketing capabilities



determine to what extent the firm will suffer from the “liability of foreignness” (Berry et al., 2010: 1460). Cultural, administrative, geographic, and economic differences continue to disturb flows of information and firms’ learning about and understanding a foreign environment (Hutzschenreuter et al., 2014).

So, what can companies do with this insight? We find a steep fall off in firm performance in the wake of a marketing crisis in low psychic distance markets. Our findings suggest that managers underestimate differences that still exist in low psychic distance markets and respond in an ineffective manner. It appears that managers have not been effectively trained in anticipating subtle differences in fairly similar because the firm did not think it was necessary (Fenwick et al., 2003). This is misguided; firms should treat even low psychic distance markets as foreign markets. The framework of Lachman, Nedd, & Hinings, (1994) might help identifying the main gaps, at least for cultural differences. Its key tenet is that congruence in core-value priorities between the home country of the firm and the host country is of critical importance for organizational effectiveness. By ranking core-value priorities for the two countries, human resource management experts can readily see where the pain points are, and focus their training on these.

Another reason why managers may underestimate difficulties in low psychic distance markets might be that their motivation to learn about these differences is low. After all, actual learning about overseas markets is heavily influenced by the motivation to learn, and this in turn is affected by managers’ a priori perceptions of differences with the home market. If differences are perceived to be minor, why waste precious time on this endeavor?

At the other side of the psychic distance spectrum, large psychic distance is also associated with lower firm performance in the wake of a crisis. The root cause is not likely to be that managers underestimate the difficulties involved but rather that they struggle formulating an appropriate, locally adapted, response to such dissimilar markets (Viswanathan & Dickson, 2007). Even in the present era of globalization, “home country imprinting” – the bias exerted by the MNC’s home country on its capabilities to learn and adapt (Kogut, 2005: 106) – remains a potent force (Ferner, 1997). While managers may seek to adapt the MNC to a host-country environment, their view as to how this should be done is colored by the cultural

and institutional characteristics of the society in which they were raised, and the cognitive orientation of key decision makers is predominantly influenced by the home country (Ngo, Daniel, Chung-Ming, & Siu-Yu, 1998; Noorderhaven & Harzing, 2003; Pauly & Reich, 1997). Unfortunately, such relatively uniform home-country-dominated processes and strategies are less likely to be effective in countries that are very dissimilar, especially when time is of the essence. Firms should increase their ability to understand distant foreign countries. This increased focus on learning is important because the difficulty of learning about and understanding of host countries is the key mechanism why performance is lower in high psychic distance countries (Håkanson & Ambos, 2010; Johanson & Vahlne, 1977). So, what can firms do to break down these barriers to learning about these markets?

One solution is cross-national training to improve multiculturalism, which is already common practice in established MNCs (Fitzsimmons, Liao & Thomas, 2017). Another approach is to devolve more power to local subsidiaries, which may require rethinking the organizational structure. Companies are constantly struggling to balance global efficiency, achieved through standardized strategies with local responsiveness, achieved through local adaptation (Vrontis et al., 2009). None of the three ‘standard’ organizational models does a good job in solving this dilemma. The functional organizational model excels on efficiency, the geographical model excels on responsiveness, while the matrix model struggles with both, as well as with speed. The network model has been proposed as a solution to this quandary, but experience with it is limited to a few companies like IBM and Airtel (Palmisano, 2014). It may be worthwhile for more MNCs to experiment with network models.

We offer three suggestions to managers to reduce the effect of psychic distance per se (whether psychic distance is small or high). First, the firm could experiment with global virtual teams. There is some evidence that psychically more diverse virtual teams perform better than less psychically diverse teams because they expect more challenges in working together and as a consequence put in more effort (Magnusson et al., 2014). Assigning rotating groups of managers to different projects around the world builds global competencies that should improve the firm’s ability to respond more effectively when it is hit by a crisis.

Second, a more ambitious approach is to deterritorialize the firm, i.e., to reduce its home country

imprinting by increasing nationality diversity in top management positions. Specifically, as noted by Miletkov, Poulsen, & Wintoki, (2017), foreign director's "diverse backgrounds and experiences can expand their firms' strategic alternatives." MNCs should be more proactive in recruiting overseas people for top management positions. This is far from company practice. Even in today's globalized world, top-level positions are overwhelmingly occupied by home-country nationals (Ghemawat & Vantrappen, 2015). Firms need to move out of their comfort zone and make a conscious effort to promote or recruit more top managers from different parts of the world. This will increase the ability of the firm to respond to distant crises in a more effective manner. Some preliminary evidence for this can be found in our study. We were able to identify the nationality of the CEO for 142 companies, which total 972 observations. For 14 of these observations, the nationality of the CEO is the same as the host country. We do find that the adverse consequences of a crisis are slightly less severe for this small sample where the crisis happens in a host country that matches the CEO of the MNC.

Third, we find evidence that firms can overcome the negative effects of psychic distance by actively strengthening their marketing capabilities. Indeed, for firms with high marketing capabilities, psychic distance matters very little. How can a firm achieve this? Drawing on a report by McKinsey (Delmulle, Grehan, & Sagar, 2015), we identify four interrelated activities. First, start with the strategic view of marketing as an investment, not an expense. Second, diagnose and benchmark your firm's marketing capabilities against your best performing peers. Where do you fall short? Third, target capabilities that are likely to have the most impact or are most important to beat the competition, *and* where you fall short versus peers. Fourth, develop institutional procedures and routines, and build an organizational culture around those capabilities. Thus, build institutional capabilities, not just individual skills (like training programs mentioned earlier). Top-performing companies actively build a culture that's customer-focused, managed for the long term, creative, confident, flexible, and fast moving. One consumer-electronics company, for example, revitalized its sales in Europe by focusing on a program to deliberately build a growth culture. It reorganized teams so they spent more time with customers, became more focused on execution, and enforced stronger accountability for both teams and individuals. In addition, executives worked to

become more agile through faster decision making, creating cross-functional teams around specific initiatives and using technology to collaborate virtually (Delmulle et al., 2015).

Future Research

Our research has several limitations that offer opportunities for future research. We integrate the predictions of the Uppsala school and the psychic distance paradox to explain why the effect of both low and high psychic distance on firm performance is negative, using anticipation and adaptation challenges posed by various levels of psychic distance (Figure 2). However, we do not specifically test these paths, which is a natural avenue for future research. This requires conducting surveys among a large pool of managers or experimental research. Further, our work relies on psychic distance. Yet, managers' perceived psychic distance is more pertinent in explaining firm performance, provided perceptions are captured from managers involved in decision making at the time shortly before the decision is made (Dow & Karunaratna, 2006: 580; Hutzschenreuter et al., 2014: 45). Yet, with few exceptions (e.g., Dow & Larimo, 2009), the relationship between perceived psychic distance and psychic distance stimuli remains under-explored. Since the former is measured at the individual level and the latter at the country level, future research could use multilevel modeling, with perceived psychic distance as dependent variable at level-1 and psychic distance as predictor variable at level-2. It is important to test a variety of functional forms to allow for nonlinear effects.

Our focus was on the effects of psychic distance and marketing capabilities on firm performance. While we include many substantive control variables, important other variables are missing. One key variable is experiential knowledge in foreign markets. The adverse consequences of a marketing crisis are likely to be less negative for a firm with a long history of operating in many foreign countries. Another variable is a measure of the importance of the host market to the firm. Unfortunately, a lack of consistent standards for international revenue disclosure makes obtaining this information extremely difficult. A third variable is the organizational structure. Some firms may have a tight, centralized structure while in others, power is pushed down to local subsidiaries. Adaptation challenges will be larger for the former type of companies. Moreover, within the same company, some overseas subsidiaries may have a mandate

that allows for little local initiative while other subsidiaries are free to adapt to local markets as they see fit. Given the breadth of our data, we were unable to obtain direct measures of these potentially important factors. Instead, we controlled for them by using firm fixed and firm–host country random effects. While this addresses the problem econometrically (Greene, 2010), the unobserved heterogeneity thus controlled contains rich theoretical insights. Future research should try to obtain direct measures for these important constructs.

It may be that certain types of psychic distance are more influential in particular IB settings than others. In an exploratory analysis, we independently analyze the effect of cultural, administrative, geographic and economic distance within the context of marketing crises. We find strong evidence of the inverted-U relationship for administrative and economic distance with CAR, weak evidence for an inverted-U relationship of geographic distance with CAR, and no effect of cultural distance. These findings call into question Kogut & Singh's, (1988: 430) claim that cultural distance is largely similar to psychic distance. Our findings suggest two things for future research. First, IB researchers that are interested in effects of psychic distance per se, are advised to use a broad measure of psychic distance, encompassing multiple types of stimuli in the spirit of Dow & Karunaratna, (2006). Second, IB scholars might want to delve deeper into when and why some psychic distance dimensions are more important than others. Given the central place of psychic distance in IB research, unpacking this much-loved construct (Zaheer et al., 2012) is a worthy topic for future research.

Consistent with most previous research on psychic distance, our paper focuses on the distance between home and the host country. This does not account for the possibility that firms may “learn” from activities in similar countries, as well as from a longer tenure in each country. The breadth of the data set does not allow us to examine near-neighborhood learning. In addition, firm-crisis measures for psychic distance are taken at the country level because there is no publicly available information about a MNC's ability to relate to foreign cultures, or how capable they are able to deal with different administrative organizations. Firm-specific measures of these variables would allow for within-country variation, and would be an interesting extension to the current work. This research also creates questions about how specific measures of

psychic distance will impact consumers at home and overseas.

Finally, our performance measure is change in shareholder value. Although this measure has been widely used in marketing to assess performance consequences of a discrete event, stock markets can experience wild gyrations that may confound reactions. This would call into question the efficient market hypothesis upon which CAR is based. We tested whether the short-term negative response was a drop that was corrected in subsequent weeks or months as the market would presumably ‘come to its senses’ and found no evidence for this. However, it is possible that long-term performance effects, spanning years rather than months, would give a different outcome. Therefore, future research should test our hypotheses with other performance measures.

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NOTES

¹We recognize that consumer attributions of who is responsible for a marketing crisis may differ from which party is actually (legally) responsible. Some consumers may blame the company when in fact it is the fault of another party, while others may blame an external party rather than the firm. Our focus is not on consumer attributions.

²<https://www.reprisk.com/our-approach#process>.

³Source: The World Federation of Exchanges (<http://www.world-exchanges.org/about-wfe>).

⁴<http://www.weforum.org/issues/global-competitiveness>

⁵<http://www.worldvaluessurvey.org/WVSContents.jsp>.

⁶Each component was measured with multiple survey items (except for corporate ethics). The gist of the items is included in parentheses. Item scores were averaged within each component for the Global Competitiveness Report.

⁷For ease of use in future research, we also provide the psychic distance between pairs of home and host countries that are not in our sample. The psychic distances provided in the table are averaged across 6-year data window in our sample.

⁸A firm i is uniquely subsumed within an industry k and home country j , hence firm-industry-home-host (i.e., ikj) combination will yield the same cross-sectional specification.

⁹Psychic distance varies by combination of home-host country as well as over time (by year), implying that we are able to introduce home- and host-country dummies in the model. In this data 66.08% of the variation in psychic distance can be explained by home- and host-country dummies. The remaining variation is accounted for by the home-host-country variation and temporal variation. Our results are based on the remainder of 33.92% variation in psychic distance.

¹⁰In this example, the dummies for China (host country) and US (home country) will account for country-specific effects, regardless of firm under

consideration. The dummies for General Motors and Ford will account for firm-specific effects, regardless of location of marketing crises. The random effect for General Motors-China or Ford-China will account for factors that govern a firm's business operations in the host country. Clearly, these effects are only identifiable if there are multiple observations pertaining crises in China, multiple firms from US, multiple crises affecting General Motors and Ford. Our data are comprehensive enough to capture this richness.

¹¹The effect size per term is calculated by converting the t value for the regression coefficient to r , using $r = \sqrt{[t^2/(t^2 + df)]}$ (Geyskens, Steenkamp, & Kumar, 1999). Effect size for multiple parameters combined (e.g., linear and quadratic effect of PD) is calculated by adding the effect sizes for the individual terms.

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