The Effects of Multimarket Contact on Foreign Market Entry

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Abstract

Interests in the effects of multimarket contact in geographic or product markets have been increasing, yet there is a lack of research on its effect on foreign market entry. We predict that multinational and multiproduct market contacts deter firms' entry into a host country and postulate three rules that firms may use to cope with the complexity resulting from the duality of multimarket contact. Our analysis of Japanese auto parts-makers' FDI location choice demonstrates that boundedly rational managers focus on multinational market contact and neglect multiproduct market contact, particularly in large and business-group affiliated firms.

Keywords: Multimarket Contact, Bounded Rationality, FDI Location Strategy, Japan, and Automotive.

An important strategic decision for firms striving for growth and global competitive advantage through foreign direct investment (FDI) is their choice of location—the host country to enter and locate facilities (Mezias, 2002). This decision has been a challenge because of the high level of uncertainty stemming from the unpredictability of social, cultural, political and economic systems of foreign markets (Yuan & Pangarkar, 2010); and its potential of changing competitive balance among firms (Knickerbocker, 1973). One strand of literature has focused on how firms cope with their uncertainty when choosing FDI location. This literature suggests two typical mechanisms adopted by firms—avoidance and imitation. Some firms avoid host countries that induce high levels of uncertainty, including those countries that are politically unstable, economically volatile, and culturally different (Globerman & Shapiro, 2003; Henisz & Delios, 2001; Henisz & Macher, 2004; Jones, 1984). Other firms imitate prior location choices of their rivals and buyers (Chan, Makino, & Isobe, 2006; Guillen 2002, 2003; Henisz & Delios, 2001; Xia, Tan, & Tan, 2008), resulting in agglomeration in a host country (Chung & Song, 2004; Gimeno, Hoskisson, Beal, & Wan, 2005).

Another strand has emphasized the role of competitive reactions in the FDI location choice of firms, showing that firms choose the same location as their rivals' to defend their status quo (Knickerbocker, 1973; Yu & Ito, 1988), or avoid such location when the number of incumbent rivals is many to be relieved of competitive pressures (Martin, Swaminathan, & Mitchell, 1998; Rose & Ito, 2008). Competitive interaction has been one of the critical research topics in the literature not only because of its substantial impact on organizational performance and strategic choice, but also because of its valuable implications for firms to avoid competition in pursuing their low-cost or differentiation strategies, and to alleviate pressures that prod them into a race to invest (Hutzschenreuter & Israel, 2009).

Since an entry to a foreign market entails high levels of uncertainty as well as the potential of increasing competitive pressures among firms, it is important for managers to understand their competitive environments, so that they are better able to maintain their competitive positions and realize the benefits of their FDI. There is extensive evidence in the strategic management literature that multimarket contact (or competition), defined as "a situation where firms compete against each

other simultaneously in several markets" (Karnani & Wernerfelt, 1985: 87), reduces the competitive pressures facing firms by increasing organizational interdependence (Areeda & Turner, 1979) and ability to counterattack. As a result, multimarket competitors tend to cooperate and not attack each other (Stephan, Murmann, Boeker, & Goodstein, 2003), a phenomenon that is widely known as mutual forbearance (Baum & Korn, 1996; Edwards, 1955; Gimeno & Woo, 1996). As suggested by the literature, multimarket contact shapes the competitive behavior of firms and results in implicit collusions among rivalry firms (Jayachandran, Gimeno, & Varadarajan, 1999).

The multimarket contact theory is particularly relevant to the analysis of multinational corporations' (MNCs) behavior because MNCs that operate in multiple geographical markets are inherently multimarket competitors (Ma, 1998, 1999). Scholars in international management have certainly long paid close attention to competition, but tended to use it only to account for the maintenance of competitive parity by matching rivals' presence in international markets (Porter, 1985). This adherence to competitive parity has resulted in the limited understanding of mutual forbearance suggested in multimarket contact theory, disabling an empirical test of theoretical claims made by Ma (1998, 1999) that competition structures in international markets provide firms the options to offer mutual threats across multiple national markets. A notable exception is the study of Yu, Subramanian, and Canella (2009) that demonstrates how greater multinational market contact between a firm and its rivals in a given host country reduces the competitive aggressiveness of the firm's subsidiary in that host country.

Nevertheless, the following two gaps in the literatures of multimarket contact and market entry still remain. First, the theoretical development and empirical testing of multimarket contact theory have been restricted to a single market type—product market or geographical market (Baum & Korn, 1996; Fuentelsaz & Gomez, 2006; Gimeno, 2002; Gimeno & Woo, 1996; Greve, 2008; Kang, Bayus, & Balasubramanian, 2010; Haveman & Nonnemaker, 2000; Young, Smith, Grimm, & Simon, 2000). This is surprising given that MNCs operating in multiple geographical markets compete in other types of market such as product, geographical, labor, financing, and raw materials markets (Hutzschenreuter & Gröne, 2009). Research on mutual forbearance of MNCs will offer unique opportunities to capture

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such multidimensional nature of multimarket contact and provide better understanding of competitive dynamics.

Second, previous studies of multimarket contact have generally been based on the rationality assumptions that managers are capable of fully observing and effectively coordinating business operations across multiple markets. Notable exceptions are the studies of Greve (2008) and Yu et al. (2009) that specify industrial and business conditions wherein such rationality assumptions may not hold. Nonetheless, there has been no systematic attempt to account for managerial and cognitive limitations resulting in bounded rationality that may become apparent with the increasing complexity of the competitive environment such as the case for MNCs competing simultaneously with rivals in product and national markets. Bounded rationality should significantly influence the behavior of MNCs that develop cognitive maps to depict world-wide structures of competitions, and incur high coordination and integration costs of responding to rivals' competitive actions at multiple geographical locations.

Thus, the purpose of this research is to examine how competition in multiple product and national (i.e., host country) markets or the duality of multimarket contact affects fimrs' FDI location choice. Although the aforementioned literatures have undoubtedly advanced our understanding of firms' FDI location choice, they have failed to explain the decision of firms competing in multiple product and national markets. These firms are greatly concerned about reducing competitive pressures, while coping with the complexity of their competitive environments (Porter, 1985). Under the conditions of bounded rationality, we develop a framework linking FDI location choice and multimarket contact. In doing so, this study responds to a call for research to investigate how multimarket contact affects the behavior of boundedly rational firms (Greve, 2008; Korn & Rock, 2001). Drawing upon works in the decision making and organizational simplicity literatures (Das & Teng, 1999; March & Simon, 1958; Miller, 1993; Miller & Chen, 1996; Schwenk, 1984; Sullivan, 2010), we hypothesize three rules that firms may use in coping with the complexity of their competitive environment as characterized by two different types of multimarket contact, and thereby influencing their FDI decisions: (1) the economic man rule suggesting that firms possess sufficient cognitive capacities to simultaneously cope with the

two types of multimarket contact, (2) the fire-alarm rule suggesting that firms respond selectively to the type of multimarket contacts that poses greater threats than the other, and (3) the focus-one rule suggesting that firms tend to focus exclusively on one type and neglect the other.

We test our hypotheses using data on Japanese auto parts-makers' FDI between 1978 and 2000 and find evidence of the mutual forbearance effect of multimarket contact on FDI location choice. Our analysis also supports the focus-one rule in guiding MNCs' decision to undertake FDI in a host country, which is found to be more common in large and business group-affiliated MNCs.

Theory and Hypotheses

Multimarket contact

Research on multimarket competition builds upon the seminal work of Edwards (1955) and defines multimarket competition as a situation in which firms compete simultaneously with the same rivals in more than one market. The extent of multimarket competition is determined by the degree of multimarket contact, which occurs when firms compete in the same market (Baum and Korn, 1999). Multimarket contact increases the scope of rivalry by providing firms the opportunities to compete against each other and to counteract moves by their rivals in one market with retaliation in all the markets in which they compete simultaneously (Kang et al., 2010). Furthermore, as firms meet in multiple markets, they become more familiar with each other and become more aware of their interdependence (Jayachandran et al., 1999). Hence, firms become more equipped to counterattack their rivals. As a result, firms with multimarket contacts avoid aggressive competition, an outcome known as mutual forbearance (Baum & Korn, 1996; Gimeno & Woo, 1996). In other words, firms become less likely to act aggressively due to the potential threat of effective retaliation in multiple markets they share with their rivals (Yu et al., 2009).

While the results are somewhat mixed, a large body of empirical work has shown supportive evidences on the mutual forbearance effect of multimarket contact on a wide range of organizational actions (Greve, 2008). For example, Baum and Korn (1996) found that California commuter airlines that meet in multiple markets are less aggressive toward each other, showing lower rates of market

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entry and exit. Gimeno and Woo (1996), and Barros (1999) found that firms with multimarket contacts were able to maintain higher prices in the US airline industry and Portuguese banking industry, respectively. Gimeno (2002) showed that the higher the level of multimarket contact, the better the performance of US airlines in 3,008 city-pair markets. In a more recent study using a sample of firms in the US personal computer industry, Kang et al. (2010) found that multimarket contact was positively related to price. In retrospect, the literature indicates that the potential benefits of multimarket contact motivate firms to dampen rivalry and engage in mutual forbearance.

In order to better capture the complexity of competitive environments facing MNCs, we jointly include two types of multimarket contact: multiproduct market contact and multinational market contact, which, to date, has not been done in previous studies. Moreover, we complement the concept of multimarket contact with the insights generated by prior research on decision-making and organizational simplicity (Das & Teng, 1999; Miller, 1993; Schwenk, 1984). Specifically, we examine how multiproduct and multinational market contacts both affect the decision of firms to enter a host country through FDI. Multiproduct market contact refers to the situation where firms compete with their rivals simultaneously in more than one product market (e.g., piston rings, crankshafts, and cylinder head covers in the case of auto parts-maker industry), whereas multinational market contact refers to the situation where firms compete with their rivals simultaneously in more than one national market (e.g., U.S., China, and Thailand).

Our first set of hypotheses draws from the previous studies on multimarket contact that we discussed above. As suggested by these studies, the mutual forbearance effect of multimarket contact will deter rivalry between firms, making the focal firm reluctant to act aggressively in the focal market where the level of multimarket contact is high with prior entrants and inclined to act aggressively in the market where the level of multimarket contact with prior entrants is low.

FDI creates genuine opportunities for firms. It expands both the geographic and product scope of firms by providing new sales outlets and access to new resources or knowledge (Caves, 1996; Porter, 1986). Accordingly, rivals would expect their counterpart to be looking for these opportunities upon

FDI entry into the host country they already occupied, which, in turn, would threaten the competitive balance and any collusive arrangement they share with their counterpart (Yu et al., 2009). Hence, these rivals have greater incentives to retaliate directly to keep their counterpart from gaining market position. With multimarket contact, such retaliation can be extremely harmful. As a result, firms are discouraged from undertaking FDI in the same host countries their multimarket rivals have already occupied. Accordingly, in a host country where the level of multimarket contact with prior entrants is low, firms will be motivated to choose this host country to increase their multimarket contact with these prior entrants (Baum & Korn, 1999; Gimeno, 2002) as well as to signal their ability to counterattack by establishing footholds in their rivals' markets (Baum & Korn, 1999). On the other hand, in a host country where the level of multimarket contact is high, firms are motivated not to undertake FDI in this host country, because entering host countries that are currently occupied by multimarket rivals through FDI would be considered an aggressive act.

Based on previous studies, the resultant mutual forbearance behavior arises regardless of the type of market defining multimarket contact. It is supported both in studies using product markets (Anand, Mesquita, & Vassolo, 2009) and geographical markets (Haveman & Nonnemaker, 2000) to define multimarket contact. To capture the theoretical arguments and empirical evidences presented in previous studies, we hypothesize:

> *Hypothesis 1a. Multiproduct market contact with prior entrants in a host country has negative*
> *impact on the likelihood that firms will choose this host country to undertake FDI.*

> *Hypothesis 1b. Multinational market contact with prior entrants in a host country has negative*
> *impact on the likelihood that firms will choose this host country to undertake FDI.*

Duality of Multimarket Contact

Although the predictions above are consistent with the extant literature, they can be subject to bias as a result of analyzing them separately. This limits our understanding of the behavior of MNCs that, by definition, locate at multiple geographical markets and quite frequently diversify their product markets. There are two reasons why the effects of multiproduct and multinational market contact

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should be jointly considered. First, in order for the effects of multimarket market contact to operate, managers need to fully understand competitive structures with their accurate knowledge about with whom they compete and in which markets. This assumption of full observability is questionable with the increase of complexity resulting from firms' entry into multiple geographical and product markets (Chen, Su, & Tsai, 2007). The cognitive burdens may disable managers to detect all their rivals' competitive behaviors in all the markets in which they compete simultaneously. While his findings using a sample of firms in the general insurance industry are mostly supportive of the mutual forbearance effect of multimarket contact, Greve (2008) indicated that the evidence of multimarket effects in perfect observability contexts may not be transferrable to imperfect observability contexts.

The second reason for the joint consideration is another assumption for the mutual forbearance effect of multimarket contact theory that effective internal coordination mechanisms are in place (Ma, 1998; Haveman & Nonnemaker, 2000). Multimarket contact promotes mutual forbearance only when firms are perfectly capable of coordinating its various internal operations in multiple markets for quickly counterattacking rivals' competitive actions and seamlessly transferring knowledge about rivals' weaknesses. Jayachandran et al. (1999) underscored the role of effective coordination mechanisms for mutual forbearance to occur and argued that "multimarket competition will lead to mutual forbearance and lower intensity of competition only if each firm achieves effective coordination between the administrative units that manage the operations in different markets. In the absence of such intra-firm coordination, competition converges to market-by-market competition" (as quoted by Yu et al., 2009: 129). In their study of automakers in global markets, Yu et al. (2009) indeed find that the effects of multimarket contact weaken with the increase of coordination and integration costs.

Because these two assumptions may not hold for MNCs that face competitive pressures, at least, from the two types of markets, it is worthwhile to analyze how multiproduct and multinational market contacts jointly affect the behavior of MNCs. When the types of markets that managers need to consider double, it is likely that their cognitive costs for full observation and coordination significantly increase. Managers may endure such high cognitive burden and be able to react systematically to

changes in their complex competitive environments, or alternatively may be boundedly rational and prompted to invent some heuristics. In the following, we therefore propose three rules that may guide MNCs' decision making pertaining to FDI. The first economic man rule rests on managers' full rationality, whereas the latter two rules (i.e., the fire-alarm and focus-one rules) capture heuristics that boundedly rational managers use.

Economic man rule

Economic man is a term introduced by March and Simon (1958) to describe rational decision making in which managers are presumed to be omniscience, obtain all of the relevant information, and possess unlimited cognitive capacities to process information, predict future events, and assess risk-return ratios for each decision option. Although the economic man model has been criticized to view managers to be too rational decision makers (March and Simon, 1958; Mezias and Starbuck, 2008), work on mindfulness relaxes some of its restrictive assumptions and supports it by considering managers to be in a state of active awareness characterized by "the continual creation and refinement of categories, an openness to new information, and a willingness to view contexts from multiple perspectives" (Levinthal & Rerup, 2006: 502). Managers can be attentive to all details of contexts in which they are embedded and adapt flexibly to unexpected contingencies through rapid responses and deliberative calculation. The calculative and economic process approaches to FDI location choice concur with this argument, predicting that firms and their managers are rational and able to consider all the costs and benefits of specific investment opportunities (Buckley, Devinney, & Louvire, 2007).

In this study, the economic man rule suggests that managers are cognitively capable of accurately processing full information and effectively mobilizing resources to develop favorable competitive environments through mutual forbearance even when coping with the two types of multimarket contact. Managers could develop fine-grained cognitive maps that help them comprehend all of their product and geographic market contacts, grasp any competitive action initiated by multimarket rivals, and formulate strategies to take advantage of mutual forbearance. If this economic man rule is true, the effects of the two types of multimarket contact should be additive because through managers' joint

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consideration, the effects of multiproduct market contact can be reinforced by those of multinational market contact (or vice versa). If managers do not dampen any information about competitive environments, high multiproduct and multinational market contact generate stronger effects of mutual forbearance that discourage firms to enter the focal host country. Chen and Miller (1994) present empirical evidence supportive to this prediction, in which they find that the likelihood that the focal airline retaliates against rivals' competitive attack multiplies when such attack is characterized as both highly visible and consequential. We thus predict that:

> *Hypothesis 2: Multinational market contact with prior entrants in a host country has stronger*
> *negative impact on the likelihood that firms will choose this host country to undertake FDI when*
> *multiproduct market contact with prior entrants is also high.*

Fire-alarm rule

The fire-alarm rule emerges from the behavioral assumption of bounded rationality and acknowledges the cognitive limitations of decision makers (March & Simon, 1958). Instead of processing all the information on the competitive environment, managers as cognitive misers make selective attention, develop some heuristics to simplify the interpretations of rivals' actions, and avoid information overload by neglecting some portions of the competitive environment (Hoffman & Ocasio, 2001; Ocasio, 1997). Simplicity is defined as "an overwhelming preoccupation with a single goal, strategic activity, department, or world view — one that increasingly precludes consideration of any others" (Miller, 1993: 117). The original tenet postulates that simplicity occurs in successful firms, in which a strategic perspective that made firms successful in the first place excessively dominates firms, generates managers' overconfidence, and causes the demise of alternative perspectives needed for adapting to dynamically changing environments (Lumpkin & Dess, 2006; Miller & Shamsie, 1999). Research, however, demonstrates that the logic of simplicity can be applied to any firm, whether growing or declining, because managers focus exclusively upon some parts of environments by neglecting the others in order to avoid cognitive overload (Das & Teng, 1999; Schwenk, 1984; Sutcliffe & Weick, 2008). Indeed, owing to managerial cognitive limitations and extreme uncertainties

associated with FDI, many studies on international business illustrate how boundedly rational decision makers simplify FDI decisions. As suggested by the literature on imitation, follow-the-leader behavior, bandwagon effect, agglomeration, and clustering (Chan et al., 2006; Chung & Song, 2004; Guillen 2002, 2003; Henisz & Delios, 2001; Xia et al., 2008), firms use others' prior entries as cues to reduce uncertainty and decision making cost by imitating other firms' FDI decisions such as choosing the same host country, the same entry mode, the same partner as well as the same exit strategy. The path dependent behavior of multinational companies found in other studies (Lu 2002; Yuan & Pangarkar, 2010) also illustrates how firms rely on bounded rationality and become persistent in choosing the same host country they already occupy, disregarding other host countries where they have no prior experience.

While the aforementioned literature of bounded rationality focuses on how firms narrow their search for solutions, the fire-alarm rule focuses on how firms react selectively to problems or situations with greater potential for negative consequences. According to the fire-alarm rule, when firms and their managers are presented with two or more competitive situations, they focus on the one that could pose greater threats and potentially bring about negative consequences on their survivability (Fiske, 1980). The rationale behind this is the argument of problemistic search theory (Greve, 1998; Cyert & March, 1963) and prospect theory (Kahneman & Tversky, 1979) that decision makers react more strongly to threats than opportunities. Problemistic search theory claims that managers are cognitive misers who do not carefully evaluate each of the multiple performance indicators, but assess their performance on the basis of whether actual performance exceeds their expectations. Furthermore, this theory suggests that organizations engage in breaking the status quo and initiate organizational change only when performance is lower than their expectation, in other words, when it is necessary to reject ongoing strategies and structures. On the other hand, prospect theory suggests that psychological impacts caused by losses are greater than that caused by gains (i.e., loss aversion) because the slope of value functions is non-linear and steeper when the domain is loss.

In our research context, we predict that managers switch their focus to either multiproduct or multinational market contact. They focus their attention on the situation where multimarket contact is

higher regardless of the type of market. Because high multimarket contact, whether multiproduct or multinational, is a threat that could lead to destructive multimarket retaliation (Baum & Korn, 1996), managers would limit their focus to the type of multimarket contact of greater degree. Thus, the mutual forbearance behavior driven by greater multimarket contact is observed regardless of the type of market. In other words, managers faced with competition in multiple markets of different types simplify their decision making by focusing on one type of multimarket contact that is more intense, and therefore, needs immediate attention and response. Their likelihood of entry into a host country depends on the intensity of multimarket contact they have with their product market rivals or national market rivals present in the host country. The greater the degree of multimarket contact with prior entrants, whether in product markets or national markets, the less likely that firms would choose this host country for FDI. Audia and Goncalo (2007) present some evidences supportive to the fire-alarm rule, showing that when two performance measures inconsistently indicate organizational health, managers choose one that indicates poorer performance to guide their risk taking behavior for restoring the status quo. Therefore, we hypothesize:

> *Hypothesis 3. Of multiproduct market contact and multinational market contact with prior entrants in a host country, only the one of greater degree has negative impact on the likelihood that firms will choose this host country to undertake FDI.*

This prediction of fire-alarm rule voids the full observability assumption of multimarket contact theory. The focus of managers is on how likely multimarket retaliation could occur as determined by the intensity of multimarket contact, and not on what type of markets are threatened with multimarket retaliation. This underscores the cognitive limitation of managers to fully observe and interpret all competitive actions of all their multimarket rivals in a host country. Accordingly, it suggests the need for decision makers to allocate their attention alternatively to different types of issues (Cyert & March, 1963; Sullivan, 2010). On the other hand, the assumption of multimarket competition that firms have effective coordination mechanism in place should hold under the fire-alarm rule. Decision makers should be able to swiftly redirect their effort to any type of multimarket contact to benefit from mutual forbearance. However, this assumption becomes problematic for firms that have decentralized

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decision making, which is very common among firms that have complex and multidimensional market domains (Haveman & Nonnemaker, 2000). Moreover, this means that the focus of attention of managers may not be simply driven by the intensity of competition as predicted by the fire-alarm rule, but instead by the relevance of competition to the markets that managers are knowledgeable about and responsible for. Our next hypothesis addresses this issue.

Focus-one rule

Like the fire-alarm rule, the focus-one rule reflects the cognitive limitations of managers, who, under the principles of bounded rationality, have limited capacity for attention and tend to allocate relevant resources to issues where their attention resides (March & Simon, 1958; Sullivan, 2010). However, unlike the prediction of the fire-alarm rule that decision makers can swiftly redirect their attention to multiproduct or multinational market contact, the focus-one rule suggests that in the context of FDI location choice, the focus of attention would be guided largely by multinational market contact.

The full observability and effective coordination assumptions of multimarket contact theory rely on the belief that decision making is centralized in organizations whereby decision makers are able to take into account the effects of all competitive actions in any market on their business activities in other markets (Haveman & Nonnemaker, 2000). However, these assumptions become problematic for multibusiness organizations that make decisions across a range of product- and national-level activities subject to diversified environmental constraints. The needs for local responsiveness and international integration make centralized decision making impractical for firms doing business abroad (Doz & Prahalad, 1984). Because of the difficulties of centralized decision making and limitations to managerial resources such as time and attention, it becomes very common among firms to departmentalize and delegate decision making directly to the managers involved. This allows firms to allocate resources to their most productive use (Martin & Eisenhardt, 2010) and simplify decision making (Miller & Chen, 1996). Thus, managers responsible for FDI decisions might be different from those responsible for product diversification decisions. In this case, managers responsible for FDI

decision would be more focused on multinational market contact than multiproduct market contact because of the following reasons.

One explanation for this is the strong influence of organizational positions to managers' cognition. Managers tend to perceive only selected portions of competitive environments and place greater priorities for decision making on issues closely relevant to their positions (Beyer, Chattopadhyay, George, Glick, Ogilvie, & Pugliese, 1997; Dearborn & Simon, 1958). Their knowledge base becomes specialized and confined to a narrow set of issues required to undertake their job. Motivational biases also play a role. Because their performance evaluation largely depends on the performance of the division they are in charge of, managers tend to make choices in ways that protect and improve their division (Galbraith & Merrill, 2006; Martin and Eisenhardt, 2010). As Miller (1993) illustrated, "Marketing differentiators, for example, pay even more attention to market share and sales growth figures, and cost leaders to budgets and expense reports. An avid marketer may therefore become less and less aware of declines in quality or efficiency; a cost leader may begin to ignore customer dissatisfaction (p. 126)." It has also been shown that managers of international divisions prefer in most cases to operate independently to be more responsive to the requirements of local markets (Yu et al., 2009). It therefore follows from these arguments:

> *Hypothesis 4a: Multinational market contact with prior entrants in a host country has stronger negative impact on the likelihood that firms will choose this host country to undertake FDI than multiproduct market contact.*

In addition, if FDI location choice is guided by the focus-one rule, we predict that the stronger negative impact of multinational market contact than multiproduct market contact would be more prevalent among large firms, because division of labor and decentralization are more likely in larger organizations (Blau, 1970). Structural differentiation is more likely to takes place in organizations with the increase of size, resulting in the creation of multibusiness units that are focused on particular products or geographies (Martin & Eisenhardt, 2010). Issues pertinent to international businesses tend to garner the attention of managers in the international business division, who place greater weight on

pressures from multinational market contact in making FDI decisions. We therefore expect to observe stronger effects of the focus-one rule in larger organizations, where some managers are responsible exclusively for international businesses.

Hypothesis 4b: The focus-one rule is more common in large firms: specifically, among large firms, multinational market contact with prior entrants in a host country has stronger negative impact on the likelihood that firms will choose this host country to undertake FDI than multiproduct market contact.

Another condition that indulges the focus-one rule is the availability of resource buffers that serve as insulation from threats to survival (Baum & Oliver, 1991; Miner, Amburgey, & Stearns, 1990), which, in turn, may cause firms and their managers to become narrowly focused (Miller, 1993; Miller & Chen, 1996). Resource buffers may create reassuring conditions that attenuate the perceived vulnerability and search incentives for a broader environmental scanning of managers. In other words, managers of firms that have resource buffers may recognize that that they are secured and powerful enough to ignore other competitive forces beyond their area of responsibility. This may reinforce the tendency of managers to focus and monitor only their own market boundaries, i.e., national markets. Previous studies have shown how resource buffers could help firms secure resource stability to be able to function efficiently and succeed even in times of turbulence. Miner et al. (1990) found that Finish newspapers' interorganizational linkages with a political party insulate them from external competitive pressures, facilitate their resource mobilization and procurement, and thereby decrease their mortality rates. Similarly, Baum and Oliver (1991) found that interorganizational linkages to government and community institutions reduce the mortality of day care centers in the Metropolitan Toronto areas.

In keeping with previous studies on the buffering role of interorganizational linkages such as affiliations with institutions or external organizations with high legitimacy or affluent resources, this study underscores affiliation with business groups, "a collection of firms bound together in some formal and / or informal ways" (Granovetter, 1994: 454). Business group affiliates, taking such forms as keiretsu in Japan, chaebol in Korea, grupos in Latin America, and business houses in India, may

mutually hold equity with each other; build interlocking relations; borrow money from banks in the groups with relatively ease; and gain efficient reciprocal access to information, expertise, human resources, and technology that other members in the same groups possess (Inkpen & Tsang, 2005). Thus, business group affiliations serve as resource buffers that provide access to an extended pool of resources and information circulating only in embedded networks, allowing firms to reconfigure their capabilities to adapt to fluctuating environments (Levinthal, 1997). Moreover, business group affiliations shield firms from social disapproval by endorsing the quality and reliability of firms, particularly when prominent and influential firms are involved (Guillen, 2000). In times of turbulence, business group affiliations can provide ready-made answers to problems (Baum & Ingram, 1998) and directly intervene to improve low performance (Lincoln, Gerlach, & Ahmadjian, 1996). Hence, firms with business group affiliations receive influence that increases the proclivity of managers to have a narrow view of the competitive environment by reducing perceived vulnerability and incentives to broaden knowledge. Thus, we expect that multinational market contact with prior entrants has stronger negative impacts on FDI location choice than multiproduct market contact among business group affiliates.

> *Hypothesis 4c: The focus-one rule is more common in firms with business group affiliations: specifically, among firms with business group affiliations, multinational market contact with prior entrants in a host country has stronger negative impact on the likelihood that firms will choose this host country to undertake FDI than multiproduct market contact.*

METHODS

Data

In order to test our hypotheses, we use the international expansion data of firms in the Japanese automobile parts industry from the *Japan Auto Parts Industry* (previously the *Structure of the Japanese Auto Parts Industry*), which has been published by Brown and Co. Ltd. in 1979, 1983, 1986, 1990, 1993 and by Yano Research Institute Ltd. in 2001. This has been one of the comprehensive, leading archival data sources on the Japanese automobile parts industry. Our data covered a large number of years from 1978 to 2000, sufficient enough to determine the location patterns of parts-

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makers' FDI. While the data source is not published annually, it tracks foreign expansions for each year for all firms in the population. However, it is also notable that the data on relationships between parts-makers and manufactures in domestic markets is not annually updated, so some cautions are needed in interpreting our findings.

While demand for vehicles in Japan has been decreasing particularly in recent years, automobile production overseas has grown significantly since the yen appreciation in 1985. In 1994, overseas production remarkably surpassed exports from Japan and peaked in 1997 at 6.33 million vehicles. However, due to the Asian financial crisis and stagnated demands in Asia, it experienced for the first time a decline of 7.2 percent in 1998 (Development Bank of Japan, 2000). Nevertheless, the overall increase in overseas production has opened new markets for Japanese automotive parts-makers. Moreover, the significant decline in domestic automobile production reduces assembly parts shipments at an average annual rate of 1.4 percent, which, in turn, has led Japanese automotive parts-makers to look overseas for survival (Brown & Company Ltd./Yano Research Institute Ltd., 2001).

The data source has been previously used by Banerji and Sambharya (1996) and Martin et al. (1998) to investigate parts-makers' international expansion. However, our use of the data is different from these previous efforts in two ways. First, unlike these studies that have focused on the follow-the-leader behavior of firms, this study measures the degree of rivalry between the focal parts-maker and other parts-makers as that have already entered the focal host country, and examines how multinational and/or multiproduct market contacts affect firms' decision to not follow rivals. Second, the two previous studies used data about entry only into a particular country, the United States. On the other hand, this study considers entries into different host countries. In our estimations, we use a choice model in which a parts-maker makes a choice by comparing several alternative host countries and then deriving a certain utility varying in the attributes of countries in the choice set.

Model

We used conditional (fixed-effect) logistic model to estimate FDI location choice, which is given by

$$\Pr(y_i = m | \mathbf{X}_i) = \frac{\exp(\beta \mathbf{X}_{im})}{\sum_{j=1}^{J} \exp(\beta \mathbf{X}_{ij})} \text{ for } m = 1 \text{ to } J$$

, where $\mathbf{X}_{im}$ contains values of independent and control variables for location choice m for firm i and β indicates the effect of each variable (Long & Freese, 2003). The unit of analysis in this study is firm-host country-year. This model estimates the effect of variables that vary, and controls for the factors that do not vary across alternatives (i.e., countries) (Greene, 2003). Hence, firm-specific variables (e.g., firm size and age) that were equal across alternatives were not included in the model. The conditional logistic model is appropriate for analyzing FDI location choice as it directly estimates how alternatives are compared, better capturing how firms choose a location from the set of alternatives (Greve, 2000). The set of alternatives contained 40 countries into which at least one parts-maker had already entered. The conditional logistic model used in this study also provides a cluster-robust estimate of the variance-covariance matrix that accounts for the lack of independence among observations and presence of samples that do not experience the event under study (i.e., firms that do not undertake FDI) (Cameron & Trivedi, 2010).

The dependent variable takes the value of 1 when a parts-maker establish a plant in a given host country, and 0 otherwise. Between 1978 and 2000, there are 891 plants established by 209 Japanese parts-makers in different host countries. Top five destinations are United States (266 entries), China (102 entries), Thailand (85 entries), Indonesia (57 entries), and South Korea (47 entries).

Independent Variables

Multinational market contact. We used Baum and Korn's (1996) firm-market level measure of multimarket contact. Unlike count measures of multimarket contact, this firm-market level measure captures the importance of multimarket rivals to the focal firm and is suitable for testing the focal firm's commitment to mutually forbear from undertaking aggressive moves (Greve, 2008). Specifically, multinational market contact for firm i in national market (i.e., host country) m at time t is calculated as follows:

$$Multinational\ market\ contact_{imt} = \frac{\sum_{j \neq i} \sum_m (D_{imt} \times D_{jmt})}{\sum_m D_{imt} \times N_{MMCt}}, for\ all\ j \sum_m{}' (D_{imt} \times D_{jmt}) > 1,$$

, where D_{imt} takes a value of 1 if focal firm i is active in national market m at time t and 0 otherwise,

D_{jmt} takes a value of 1 if rival j is active in national market m at time t and 0 otherwise, and N_{MMCt} is

the number of multinational market rivals that focal firm i encounters in more than one national

markets at time t. Thus, multinational market contact for focal firm i is the average number of national

markets in which firm i competes with its multimarket rivals in a given host country.

Multiproduct market contact. We measured multiproduct market contact using the same approach

employed for measuring multinational market contact. We resort to the classification schemes of

product markets in the *Japan Auto Parts Industry,* which finds 251 product markets in this population

such as piston rings, air bags, and fuel pulsation dumpers. On average, firms operate in 5.86 product

markets during the observation period. Using Baum and Korn's (1996) firm-market level measure of

multimarket contact, multinational market contact for focal firm i is thus the average number of

product markets in which firm i competes with its multimarket rivals in a focal host country. If focal

firm i is competing with two rivals in the focal host country and meets the first in three product

markets and the second in five product markets, the multiproduct market contact measure for firm i

would be (3+5)/2, or 4.

Control Variables

Conditional logistic regressions are a type of fixed-effects model in which firm characteristics of

parts-makers and year effects are controlled. In order to account for alternative influences, the model

includes several other control variables. These controls include real gross domestic product (GDP)

growth rate obtained from the *World Bank's World Development Indicators* and the number of

registered vehicles during a given year taken from *the Ward's World Motor Vehicle Data* that

represent the attractiveness of a given host country. We also included the ratio of FDI inflow to GDP,

sourced from the *World Bank's World Development Indicators*, to capture the openness of a host

country to foreign investments (Henisz & Delios, 2001).

We also controlled for the effects of imitation in making entry decisions (Chan et al., 2006; Henisz & Delios, 2001) by counting the number of subsidiaries of parts-makers and assemblers that have already entered the focal host country. The number of assemblers' subsidiaries could be another proxy to market demands. In addition, we control the number of the focal parts-maker's subsidiaries in the host country as its prior entries and familiarity with the host country significantly reduce the uncertainty involved in making FDI decisions (Henisz & Delios, 2001).

Firms may be unwilling to enter host countries with high political risk (Murtha & Lenway, 1994). To measure political risk in a host country in a given year, we used the annual political hazards index created by Henisz (2000). This index ranges from 0 (minimal hazards) to 1 (extremely hazardous), which measures the extent to which policies may change if there is a change in the preferences of a government body in the host country. A comprehensive description of this index is available in Henisz (2000) and Henisz and Delios (2001).

It is possible that cultural distance between the home and the host country makes foreign investments more costly and uncertain (Kogut & Singh, 1988; Kang & Jiang, 2010). To address this concern, we include cultural distance as a control. We measured cultural distance using the composite index constructed by Kogut and Singh (1988), which is the arithmetic average of the variance-corrected deviations between Hofstede's (1980) four cultural dimensions' (i.e., power distance, uncertainty avoidance, masculinity /femininity, and individualism) scores for the home and host countries.

To account for regional strategies of firms doing business abroad, we included regional dummies for Asia, Europe, North America, South America, Africa, and Oceania. Because firms prefer to undertake FDI in their home regions (Collinson & Rugman, 2008; Rugman & Verbeke, 2004), we use Asia as a reference category and expect downward effects of other regional dummies.

RESULTS

Table 1 reports the descriptive statistics and correlations for the variables used in our analysis of FDI location choice. Tables 2 and 3 present the results of conditional logistic regressions. Model 1

presents the results of a specification that includes only the control variables. All signs on the controls, excluding the number of assemblers' subsidiaries, are in the expected direction. Firms are more likely to choose attractive host countries with higher GDP growth rates and market demand as well as those host countries with open policies to FDI. We also find support for the path-dependent and imitative behaviors of firms as suggested by the positive coefficients on the number of focal parts-maker's subsidiaries and other parts-makers' subsidiaries in the host country, respectively. Interestingly, in contrast to our expectation, the number of assemblers' subsidiaries has a downward effect on FDI location choice, although this effect is not significant in most of the models. We also find that the greater the cultural distance between the home and the host country, the less likely that firms choose this host country. Finally, we find supporting evidence on firms' preference of locating FDI within the home region, that is, Japanese parts-makers are more likely to choose Asian region than other regions as FDI destination. These results of control variables, which are consistent with previous findings and our expectations, amplify our confidence in our sample and research designs.

=====TABLES 1, 2, and 3 ABOUT HERE=====

Models 2 through 6 examine the influence of multinational market contact and multiproduct market contact on FDI location choice. Under hypotheses 1a and 1b, each type of multimarket contact should have negative and significant coefficients in models 2 and 3. We find that the coefficients of multiproduct and multinational market contacts are negative and significant in models 2 ($p. < .05$) and 3 ($p < .01$), respectively, rendering support to hypotheses 1a and 1b.

Under the economic man rule of hypothesis 2, both multinational and multiproduct market contacts along with their interaction term should have negative and significant coefficients in model 4 — the greater the multinational and multiproduct market contacts are the more likely that firms will mutually forbear, and thus the less likely they are to choose the host country. We find in model 4 that the coefficients of multinational market contact and interaction terms are both negative and significant ($p < .01$), whereas multiproduct market contact is positively and significantly associated with FDI location choice. To facilitate interpretation, we plot the obtained results of model 4 in Figure 1, in

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which the vertical axis indicates the multiplier of the rates that a firm chooses a focal host country as the FDI destination. It appears from the figure that contrary to hypothesis 2, the entry rate is at the lowest when multinational market contact is high while multiproduct market contact is low, and at the highest when multinational market contact is low while multiproduct market contact is high. These results do not provide evidence for the additive and reinforcing effects of the two types of multimarket contact, rejecting the economic man rule of hypothesis 2.

=====FIGURE 1 ABOUT HERE=====

Under the fire alarm rule of hypothesis 3 that predicts firms to focus on the type of multimarket contact that is more intense and therefore needs more attention, the variable containing only the type of multimarket contact with greater value should have negative and significant coefficient in model 5. To test the fire alarm rule of hypothesis 3, we create a composite variable that takes the value of multiproduct or multinational market contact depending on which one has the higher value. Because in many cases multinational market contact has greater values than multiproduct market contact, the composite variable that we initially create contains most of the data from multinational market contact. Indeed, using this variable in regressions results in replications of the findings of model 3, which only includes multinational market contact (i.e., beta = —.38 with the standard error of .07). To alleviate this issue, we standardize both multiproduct and multinational market contact variables, and then take one of the values that is higher than the other. As a result, the correlation coefficient with multinational market contact has improved (from r=0.99 to r=0.83), which is reported in Table 1. This standardized composite variable is then used for estimating model 5. We find its coefficient to be negative and significant ($p < .01$), suggesting support to hypothesis 3 about the fire-alarm rule.

Under the focus-one rule of hypothesis 4a, multinational market contact should have larger negative and significant coefficient in model 6, suggesting that the mutual forbearance behavior of firms is largely driven by multinational market contact. In model 6, we find negative and significant effects of multinational market contact ($p < .01$) but insignificant effects of multiproduct market contact, suggesting support to hypothesis 4a.

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The analyses thus support the fire-alarm and focus-one rules, but not the economic man rule. Both the fire-alarm rule and focus-one rule allow MNCs to simplify their competition schemes and focus the attention of their managers on a narrow range of concerns, but which of the two rules has greater explanatory power? Although models 2 through 6, except for model 4, yield estimations consistent with the predictions, model 6 shows the most significant improvement in model fit in terms of Wald chi-squared, pseudo R-squared and log likelihood as compared with the baseline model 1. The improved model fit suggests the focus-one rule to be more valid than the fire-alarm rule. In other words, consistent with the prediction of hypothesis 4, firms' decision to undertake FDI in a host country is largely driven by multinational market contact with prior entrants in the host country—the greater the level of multinational market contact with prior entrants, the less likely firms choose that host country regardless of multiproduct market contact with these prior entrants. Two additional findings that we have already presented above also corroborate our interpretation that the focus-one rule garners stronger support than the fire-alarm rule: (1) Figure 1, which illustrates the interaction effects, indicates that multinational market contact deters entry more significantly than multiproduct market contact and (2) results using the composite variable that contains more values of multinational market contact replicate findings in model 6. Hence, we base the discussion on the results from model 6.

Using samples of large and small firms, we test hypothesis 4b that predicts the focus-one rule to be more common in large firms. We rank the size based on the number of employees and identify the bottom 25% as small firms and top 25% as large firms. Model 7 presents the estimates for large firms and model 8 for small firms. The coefficient of multinational market contact is negative and significant at 1% level, whereas the coefficient of multiproduct market contact, although negative, is only significant at 10% level in model 7. On the other hand, both coefficients of multinational and multiproduct market contacts are negative and significant at 1% level in model 8. Thus, hypothesis 4b is supported, suggesting that larger firms are more prone to focus on multinational market contact, whereas small firms sensitively react to both types of multimarket contact. To illustrate the effect of size, we graphed the effect of multiproduct and multinational market contacts on FDI location choice

both for larger and smaller firms in Figures 2 and 3, respectively, and calculated the multiplier of the rate that firms choose a given host country at two levels of multiproduct and multinational market contacts: the mean, and the mean plus one standard deviation. Figures 2 and 3 show that while the downward effects of multiproduct and multinational market contacts are both stronger among smaller firms, only multinational market contact has a strong downward effect among larger firms. For larger firms, a one standard deviation increase in multinational market contact decreases the multiplier rate by more than threefold while a one standard deviation increase in multiproduct market contact decreases the multiplier rate only by 7.5 %. On the other hand, for smaller firms, a one standard deviation increase both in multinational and multiproduct contacts decreases the multiplier rate by more than threefold.

=====FIGURES 2 AND 3 ABOUT HERE=====

It is also noteworthy that when we use a more lenient breakdown (median split, top 35% and bottom 35%) of samples based on the number of employees, only multinational market contact is significant for both groups of larger and smaller firms. This result further supports our finding and implies that as firms increase in size, the focus-one rule becomes more evident.

We test hypothesis 4c by breaking down the sample into business group-affiliated firms and non-business group-affiliated in models 9 and 10, respectively. Following Banerji and Sambharya (1996), we identified a parts-maker as a business group-affiliated firm if it is a subsidiary of an auto-maker, or has close ties with a particular auto-maker through cross shareholding and interlocking. Only the coefficient of multinational market contact is negative and significant ($p < .01$) in model 9, while both coefficients of multinational and multiproduct market contact are negative and significant ($p < .01$) in model 10. Thus, as predicted by hypothesis 4c, compared to non-business group-affiliated firms, business group-affiliated firms are more likely to focus on multinational market contact, which has a significant downward effect on FDI location choice. The results thus suggest greater applicability of the focus-one rule to firms with group affiliations.

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In line with previous studies on FDI location choice (e.g., Chan et al., 2006; Gimeno et al., 2005; Guillen, 2003; Henisz and Delios, 2001; Yu & Ito, 2008; Yuan & Pangarkar, 2010), the dependent variable above simply captures the choice of FDI destinations with no distinction between wholly-owned subsidiaries and joint ventures. Nonetheless, we should consider the possibility that the entry mode of FDI is an endogenous choice that may affect a firm's likelihood of entry to a particular host country. Rivals may consider a focal firm's entry in the form of wholly owned subsidiaries as an aggressive competitive move than joint ventures, because the former entails greater resource commitments. It is thus plausible that the focal firm exhibits greater tendency to avoid host countries where it has high multimarket contact with prior entrants when it intends to enter in the form of wholly owned subsidiaries. Thus, as a robustness check, we investigate our hypothesis by creating two new dependent variables: the choice of destinations of wholly owned subsidiaries and that of joint ventures.

The patterns of findings in the additional analysis are consistent with those that we reported above, yielding overall support to the focus-one rule. The coefficient of multinational market contact is significantly smaller when we predict entry in the form of joint ventures than wholly owned subsidiaries, suggesting that mutual forbearance effects appear most for behavior that rivals perceive to be more aggressive. The contrasting finding is that the focus-one rule is more common in small firms when we predict the choice of destinations of joint ventures plausibly because even joint ventures require greater resource commitments from smaller firms and resource pooling with other firms could make them a competitive rival regardless of size. Also, in the case of location choice for wholly owned subsidiaries, both types of multimarket contact are insignificant for large firms, which may be attributed to overwhelming resource holdings that attenuate the perceived risk of counterattacks from rivals. We also find that the focus-one rule is prevalent among small firms that enter host countries in the form of wholly owned subsidiaries, but they tend to choose host countries where multiproduct market contact with prior entrants is high. This could be due to the low level of small firms' product diversification, which motivates them to pursue opportunities to establish multiproduct market contacts despite the risk of counterattacks. Regardless of these differences to which we can, at least at this point, present tentative interpretations based on a parsimonious

assumption that firms first decide the mode of entry and then choose the FDI destination in a two-stage choice decision making model, we find support for the focus-one rule in both cases of wholly owned subsidiaries and joint ventures. In addition, as we expected, the mutual forbearance effect on FDI location choice is evidently stronger for wholly owned subsidiaries. We thereby conclude that our results are robust to the entry mode of FDI.

DISCUSSION

FDI location choice has been an important topic in the international business literature. Previous studies have advanced our understanding about how firms cope with their uncertainty when choosing FDI location through avoidance and imitation (e.g., Chan et al., 2006; Gimeno et al., 2005; Globerman & Shapiro, 2003; Henisz & Delios, 2001), and how firms respond to their rivals' FDI location choice (e.g., Knickerbocker, 1973; Martin et al., 1998; Rose & Ito, 2008). Nevertheless, we still know little about how firms competing in multiple markets choose location for their FDI.

In light of this issue, our study is the first to systematically examine the effect of two types of multimarket contact (multiproduct and multinational market contact) on FDI location choice. In developing our arguments, we reconsider the two main assumptions of the hypothesis that multimarket contact leads to forbearance (full observability and presence of effective internal coordination mechanisms) (Baum & Korn, 1996; Edwards, 1955; Gimeno & Woo, 1996; Kang et al., 2010). While this paper provides additional evidence on the forbearance effect of multimarket contact by showing that firms are less likely to choose host countries where they have high level of multimarket contact with prior entrants, it highlights how this effect may be altered when cognitive capabilities of firms and their managers are considered. Specifically, we propose three rules that may guide the decisions of firms to choose a host country as FDI destination and to forbear from competition. The economic man rule suggests that firms are able to jointly consider multiproduct and multinational market contact and would be less likely to choose a host country with high multiproduct market contact when multinational market contact is also high; the fire alarm rule suggests that firms are able to consider only the type of multimarket contact that has greater value and would be less likely to choose a host

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country where multimarket contact is high regardless of the type of multimarket contact; and the focus-one rule suggests that firms tend to focus only on one type of multimarket contact (i.e., multinational market contact) and would be less likely to choose a host country with high multinational market contact. The results support the focus-one rule. In addition, the results show that the focus-one rule becomes more evident among large firms and business group-affiliated firms.

The results of this study suggest important extensions to existing work in several areas and present some implications to practitioners. First, this study raises some fundamental issues for international business research, particularly for research on international expansion. International business research has argued to take interorganizational factors into account and has emphasized the importance of identifying rivals in a host country for imitation (Martin et al, 1998) and counter attack purposes (Knickerbocker, 1973). This study suggests that such mechanisms may underestimate the benefits of tacit coordination and the risk of competitive collisions. Models that include measures and patterns of interfirm rivalry would allow research on international expansion to account for competitive dynamics that shapes strategic behavior and performance outcomes (Porter, 1980). For example, future research could examine how multiproduct and multinational market contacts with rivals in a host country influence the success and survival of subsidiaries in that host country.

Second, our study has implications for strategic management research. The strategic management literature has focused on a single type of market when analyzing the effects of multimarket contact. In contrast, this study captures two types of multimarket contact to test the multimarket contact theory— multiproduct and multinational. This approach corresponds to the suggestion of Kang et al.'s (2010) and Hutzschenreuter and Grone's (2009) to expand the analytical dimensions of multimarket contact, so that the complexity of actual competitive interactions that MNCs experience can be better captured. Our findings suggest that with increasing uncertainty and complexity of competitive environments facing a firm doing business abroad, the assumptions on full observability and effective internal coordination may not hold. As a result, the firm may not be able to act in accordance with mutual forbearance and may ultimately violate any tacit agreement among multimarket rivals. This likely

provokes rivals' aggressive retaliations across multiple markets or limits firms' opportunities to realize the benefits of mutual forbearance (Chen, 1996; Karnani & Wernerfelt, 1985).

Our finding about the negative impacts of multimarket contact on firms' choice of geographic markets is consistent with Fuentelsaz and Gomez (2006), Greve (2000), and Haveman and Nonnemkaer (2000); and germane particularly to Delios, Gaur, and Makino (2008), Ghemawat and Thomas (2008), and Yu et al. (2009) that imply the mutual forbearance behavior of MNCs in choosing FDI destinations. In addition, such mutual forbearance effect of multimarket contact provides support for the finding of Rose and Ito (2008) that indicates active mutual avoidance of Japanese automobile companies when expanding abroad, which was contrast to their expectation. Indeed, firms avoid risky competition in other markets. Given the importance of multimarket contact theory for developing competition policy and understanding firm behavior and performance (Fuentelsaz and Gomez, 2006), more efforts should be dedicated to capture the complexity of competitive environments facing firms operating in several types of markets.

Related to the above implication, our study also points out the relevance of considering the multidimensional nature of constructs and different decision making rules that could influence the applicability of organization theories. Other organization theories can be investigated in a manner similar to what we have done. For example, the problemistic search theory, which suggests that firms and their managers are more likely to engage in risk-taking behaviors when performance is below the aspiration level (Greve, 1998), has been examined using only one measure of performance. Given that managers are concerned with different measures of performance (e.g., profitability, growth, market share and innovativeness), using different measures of performance and testing different decision making rules that shift managers' attention in examining the problemistic search theory will deepen our understanding of firm search behavior.

Third, our study also implies the need for developing theories on international expansion that incorporate decisions made by managers with bounded rationality. Our findings about the focus-one rule substantiate cognitive simplification processes in strategic decision making at MNCs (Das &

Teng, 1999; Miller, 1993; Schwenk, 1984). Cognitive limits influence processes through which managers enact and interpret environments, set goals and identify problems, and generate and evaluate strategic alternatives (Narayanan, Zane & Kemmerer, 2011). This study demonstrates that managers simplify competitive environments by heeding one type of multimarket contact that is perceived to be relevant to the decision at hand and neglecting the other. In this regard, we are undoubtedly in line with Aharoni, Tihanyi, and Connelly's (2011) call for incorporating decision-making heuristics and biases into international business. There is the opportunity for research exploring the decisions made by managers of different cultural background who may use different decision-making heuristics.

Finally, a practical implication from these findings is that although the focus-one rule simplifies competitive environments and reduces managers' cognitive burdens, such cost-saving orientation could increase the risk associated with international entry that may end in severe counterattacks from prior entrants, wasteful foreign investments and substantial entry failures. Accordingly, MNCs must strive to build a system that allows sharing of information and coordination across different market divisions. One way to do so is by fostering effective cross-business-unit collaborations to leverage information about contacts in multiple markets or by centralizing foreign entry decisions in specific subunits that pool such information (Martin & Eisenhardt, 2010). To maximize firms' overall market performance, the process associated with the decision to engage in FDI in a host country should include cross-business-unit managers and conduct a competitive risk analysis whereby managers predict competitive retaliations of their rivals in product and national markets. Moreover, large firms and business group-affiliated firms should be more conscious of their competitive environments and be especially critical of their managers' tendency to focus on their own division without realizing how their decisions may affect performance across multiple markets.

Although this study is an important step to examining a more detailed competitive environment of firms doing business abroad, this study has some limitations. First, it may be limited by its focus only on home-country rivals. Although it is important for future research to include rivals from other countries and to examine whether multimarket contact may lead to mutual forbearance among rivals of different cultures, we consider our findings to be still valid because the significant portions of our data

depict eras prior to the parts makers' internationalization when the scope of competition is limited to domestic markets.

Second, another limitation of the study is the focus on the automobile parts industry in Japan for testing the hypotheses. The findings of this study might be unique to Japan and should be replicated with data from other country settings. Nevertheless, our findings about multimarket contact capturing the deterministic effects of the structure of competitive interactions are shown to be highly generalizable.

Third, we obtain findings that managers focus only on international multimarket contact when making decisions about the FDI destinations, whereas our theory would be strengthen if we also find that managers heed multiproduct market contact more when making decisions about product market entry. The use of alternative dependent variables such as sales, commercialization at local markets, and product price can also make our results robust. Such additional analysis will be critical if firms use different rules for preserving cognitive resources for different strategic actions.

Fourth, for the purpose of empirical parsimony, this study presumes firms to operate only in the two types of markets, but if it is possible in other contexts that firms react to more than two types of multimarket contact, future research should investigate whether our finding about the focus-one rule is still applicable. With the increase of types of multimarket contact, managers may adopt different rules to alleviate cognitive burdens and respond cognitive-efficiently to rivals' moves (Ginsberg, 1994; Hodkinson & Healey, 2007). Furthermore, although our analysis uses cross-sectional panel data, the extent to which it captures dynamics is rather limited. For example, managers are presumed to equally recognize both rivals' slow and fast strategic moves as well as both incremental and radical shifts of rivals' market portfolios. It is also notable that our fixed-effect analyses control for time invariant firm resource and capabilities but fail to capture the dynamism of acquiring these resources and capabilities through accumulation of competitive experience (Phene & Almeida, 2008). Thus, future research should incorporate these temporal aspects of rivals' actions and firm resource heterogeneity into analytical model.

CONCLUSION

To conclude, this study represents a significant shift in the analysis of multimarket contact in the context of international business. This study is the first attempt to jointly consider multiproduct and multinational market contact in analyzing the relationship between the duality of multimarket contact and FDI location choice. Drawing from the decision making and organizational simplicity literatures, the models we tested here provide a framework for understanding how the complexity in the competitive environment may alter the competitive behavior of firms. An important managerial implication of the results in this study is the importance of fostering cross-business-unit collaborations and providing managers search incentives for a broader environmental scanning to avoid excessive foreign investments and substantial entry failures. Despite some limitations, this study raises some fundamental issues for international business research, particularly for research on international expansion.

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Table 1. Descriptive statistics and correlations

	Variable	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	GDP growth	3.62	3.97	1															
2	N. of registered cars	15.02	1.63	-.12	1														
3	FDI/GDP	.02	.03	.12	-.16	1													
4	N. of other parts-makers' subsidiaries	.17	.60	.07	.29	-.04	1												
5	N. of assemblers' subsidiaries	.62	.75	.07	.19	-.01	.28	1											
6	N. of the focal parts-maker's subsidiaries	.10	.30	.05	.27	.00	.52	.34	1										
7	Political risk	.34	.19	-.14	.47	-.13	.00	.20	.05	1									
8	Cultural distance	2.70	1.66	.10	-.04	.29	.05	.09	.06	.06	1								
9	Europe	.28	.45	-.12	.34	-.03	-.10	-.32	-.09	.29	.16	1							
10	North America	.05	.23	-.03	.42	-.06	.36	.21	.31	.09	.06	-.15	1						
11	South America	.21	.41	-.17	-.09	-.06	-.11	-.13	-.10	.09	-.31	-.32	-.12	1					
12	Africa	.05	.22	.03	-.42	-.07	-.07	-.14	-.07	-.35	-.13	-.15	-.06	-.12	1				
13	Oceania	.05	.22	-.05	.04	.05	-.06	.26	-.03	.13	.04	-.15	-.06	-.12	-.06	1			
14	Multiproduct market contact	.02	.30	.00	.10	.00	.27	.10	.20	.04	.01	-.03	.12	-.01	-.02	.00	1		
15	Multinational market contact	.23	.81	-.03	.27	.00	.27	.23	.30	.14	.01	-.03	.24	-.03	-.06	.05	.24	1	
16	High (MPMC, MNMC)	.24	1.34	-.02	.24	.00	.34	.21	.32	.12	.01	-.04	.24	-.03	-.06	.04	.73	.83	1

Table 2. Results of fixed effects conditional logistic regressions for FDI location choice

Variables	Full					
	(1)	(2)	(3)	(4)	(5)	(6)
GDP growth	-0.01	-0.01	-0.02	-0.02	-0.02	-0.02
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
N. of registered cars	0.38**	0.37**	0.38**	0.36**	0.37**	0.37**
	(0.06)	(0.06)	(0.06)	(0.07)	(0.06)	(0.06)
FDI/GDP	11.82**	12.20**	12.07**	12.20**	12.34**	12.32**
	(2.11)	(2.13)	(2.07)	(2.10)	(2.10)	(2.10)
N. of other	1.07**	1.10**	1.10**	1.11**	1.11**	1.12**
parts-makers' subsidiaries	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)
N. of all	-0.20+	-0.19+	-0.09	-0.1	-0.14	-0.09
assemblers' subsidiaries	(0.10)	(0.10)	(0.11)	(0.11)	(0.11)	(0.11)
N. of the focal	4.59**	4.59**	4.62**	4.65**	4.60**	4.62**
parts-maker's subsidiaries	(0.17)	(0.17)	(0.17)	(0.17)	(0.17)	(0.17)
Political risk	0.02	0.08	0.22	0.23	0.17	0.24
	(0.30)	(0.30)	(0.31)	(0.31)	(0.31)	(0.31)
Cultural distance	-0.10+	-0.10+	-0.09+	-0.10+	-0.10+	-0.09+
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
Europe	-0.69**	-0.71**	-0.60**	-0.60**	-0.66**	-0.61**
	(0.18)	(0.18)	(0.19)	(0.19)	(0.19)	(0.19)
North America	-3.08**	-3.04**	-2.69**	-2.69**	-2.86**	-2.69**
	(0.32)	(0.32)	(0.33)	(0.33)	(0.33)	(0.33)
South America	-0.86**	-0.83**	-0.75**	-0.74**	-0.77**	-0.74**
	(0.23)	(0.23)	(0.24)	(0.24)	(0.24)	(0.24)
Africa	-1.39	-1.36	-1.22	-1.22	-1.27	-1.2
	(0.91)	(0.91)	(0.89)	(0.89)	(0.99)	(0.89)
Oceania	-1.08**	-1.08**	-1.04**	-1.02*	-1.04**	-1.04**
	(0.38)	(0.39)	(0.40)	(0.40)	(0.39)	(0.40)
Multiproduct market		-0.31*		0.68*		-0.21
contact (MPMC)		(0.14)		(0.30)		(0.15)
Multinational market			-0.44**	-0.40**		-0.41**
contact (MNMC)			(0.07)	(0.07)		(0.07)
MPMC x MNMC				-0.09**		
				(0.03)		
High (MPMC, MNMC)					-0.16**	
					(0.05)	
Wald chi-squared	1161.16	1217.64	1185.4	1217.76	1221.5	1241.06
Pseudo R-squared	0.63	0.63	0.64	0.64	0.64	0.64
Log-likelihood	-1127.99	-1121.14	-1099.29	-1089.57	-1108.24	-1096.54
Observations	24986	24986	24986	24986	24986	24986

Notes: (1) Robust standard errors in parentheses, (2) + significant at 10%; * significant at 5%; ** significant at 1%

Table 3. Results of fixed effects conditional logistic regressions for FDI location choice (cont.)

Variables	Large	Small	Group-affiliated	Non group-affiliated
	(7)	(8)	(9)	(10)
GDP growth	-0.03	0.00	-0.05*	0.00
	(0.02)	(0.04)	(0.02)	(0.02)
N. of registered cars	0.50**	0.2	0.29**	0.35**
	(0.11)	(0.18)	(0.10)	(0.09)
FDI/GDP	15.19**	15.91**	20.23**	9.00**
	(3.79)	(5.47)	(2.92)	(2.82)
N. of other	1.10**	0.98**	1.06**	1.29**
parts-makers' subsidiaries	(0.11)	(0.21)	(0.11)	(0.12)
N. of all	-0.27	0.44	-0.31+	0.1
assemblers' subsidiaries	(0.18)	(0.27)	(0.18)	(0.14)
N. of the focal	3.77**	5.87**	5.40**	4.13**
parts-maker's subsidiaries	(0.25)	(0.47)	(0.32)	(0.19)
Political risk	0.97+	0.55	0.75	-0.43
	(0.50)	(0.86)	(0.49)	(0.44)
Cultural distance	-0.14	-0.08	-0.24**	-0.09
	(0.11)	(0.14)	(0.09)	(0.07)
Europe	-0.55*	-0.83	-0.72**	-0.43
	(0.27)	(0.60)	(0.28)	(0.29)
North America	-2.78**	-1.70+	-2.66**	-2.80**
	(0.60)	(0.94)	(0.46)	(0.51)
South America	-0.47	-0.79	-0.90**	-0.49
	(0.35)	(0.63)	(0.34)	(0.36)
Africa	-13.91**	-14.72**	-13.05**	-0.67
	(0.42)	(0.59)	(0.34)	(1.01)
Oceania	-0.67	-16.41**	-1.05*	-0.9
	(0.50)	(0.35)	(0.42)	(0.55)
Multiproduct market	-0.25+	-1.21**	-0.11	-0.76**
contact (MPMC)	(0.15)	(0.46)	(0.16)	(0.28)
Multinational market	-0.29**	-0.75**	-0.39**	-0.39**
contact (MNMC)	(0.08)	(0.20)	(0.09)	(0.12)
Wald chi-squared	17272.47	26387.17	32535.15	679.34
Pseudo R-squared	0.59	0.76	0.68	0.62
Log-likelihood	-404.64	-152.58	-441.66	-575.99
Observations	7250	5870	11051	12558

Notes: (1) Robust standard errors in parentheses, (2) + significant at 10%; * significant at 5%; ** significant at 1%

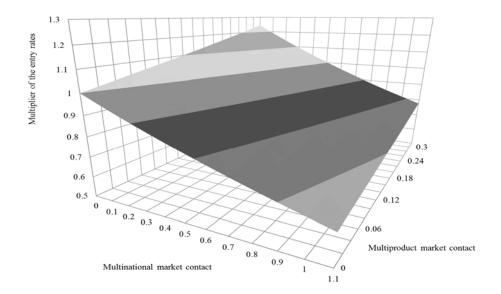Figure 1: Interaction effects for testing the economic man rule

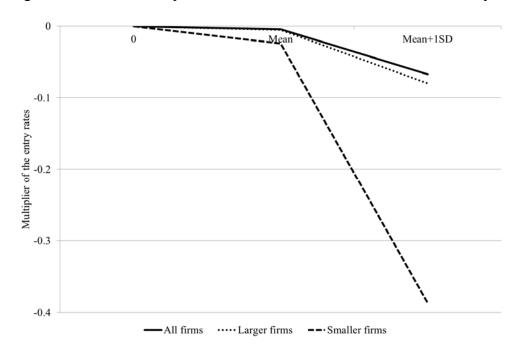Figure 2. Effects of multiproduct market contact on FDI location choice by size

Figure3. Effects of multinational market contact on FDI location choice by size