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Entry Timing in Foreign Markets: A Meta-analytic Review and Critique

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ABSTRACT

In this meta-analytic review, we examine the entry timing-firm performance relationship as it has been studied in international business research. In addition, we present several moderating factors that strengthen or weaken that relationship. We find that early entry bears financial advantages in international markets, but those advantages depend on country of entry and origin, industry context, performance measurement, type of entry and time period. We conclude with a discussion of avenues for future research.

1. Introduction

Almost thirty years ago, Lieberman and Montgomery (1988) developed the most prevalent framework to explain the entry timingfirm performance relationship. Their first mover advantages (FMA) framework argues that a firm that enters a given market before its rivals gains a competitive advantage (Lieberman and Montgomery, 1988). Usually called the first mover or pioneer, this firm relies on the mechanisms of technological leadership, market preemption and switching costs to outperform later entrants in the market. Although scholars initially tested entry timing in domestic contexts (Carpenter and Nakamoto, 1989; Lambkin, 1988; Robinson, 1988; Robinson and Fornell, 1985), entry timing research eventually progressed to and gained attention in international business (IB) environments (Johnson and Tellis, 2008; Mascarenhas, 1992; Pan et al., 1999; Song et al., 1999). Yet, the empirical results of the entry timing-firm performance relationship within the IB domain have been rather mixed with some authors finding that early entry benefits the firm (Isobe et al., 2000; Mascarenhas, 1992; Pan et al., 1999; Tsoua et al., 2009) while others find little or no benefit of early entry (Delios and Makino, 2003; Nehrt, 1996).

One way to address this discrepancy and provide a thorough and comprehensive assessment of the entry timing-firm performance relationship is to conduct a meta-analytic review. Thus, in this meta-analytic review, we aim to answer the following question: *do early entry advantages exist in international markets*? A second objective of our paper is to identify key moderating conditions to the relationship between entry timing and firm performance. This will allow us to specify *when* and *where* FMA are strengthened, weakened or nonexistent in international markets. To conduct our review, we performed a comprehensive search of business journals and unpublished works for papers testing the entry timing-firm performance relationship in the IB domain. In addition, we coded each paper based on several moderating factors, such as country of entry and origin, industry context, type of entry into a given market (e.g., product entry versus entry through a joint venture, wholly-owned subsidiary or strategic alliance), time period, and

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performance measurement (i.e., objective versus subjective measures of performance²). Our meta-analytic results suggest that entry timing advantages exist in international markets, but there are significant differences across multiple moderating conditions. In particular, entry timing advantages are more salient: for firms entering Europe, for European pioneers, for service firms compared to manufacturing firms, when firms rely on products to enter a country (versus a joint venture, strategic alliance or wholly-owned subsidiary), during the 2000s compared to the 1990s and when performance is measured subjectively rather than objectively.

Our paper makes several contributions. First, through the meta-analysis, we obtain more robust effects regarding the entry timingperformance relationship, resolve conflicting results in the existing literature and make broader generalizations to the validity of findings across various samples and research conditions. Second, we identify several moderating conditions that highlight key differences in the relationship between entry timing and firm performance and highlight the nuanced nature of those relationships. Finally, we identify weaknesses and shortcomings in prior research to suggest directions for future research.

Our paper is organized as follows. First, we review the conceptual foundation of entry timing research, including a review of the empirical findings of entry timing research in international markets. Then, we outline the methodological approach utilized in conducting the meta-analytic review and discuss the findings. Finally, we suggest directions for future research to develop a more global perspective of the entry timing-firm performance relationship. For purposes of this review, we focus exclusively on IB entry timing-firm performance studies, which we define as studies that involve entry across national boundaries or studies that are conducted in countries outside of the firm's home country (Wrigth and Ricks, 1994).

2. Literature review

2.1. Conceptual foundation

The entry timing literature investigates the motivation, consequences, and sustainability of early and late market entry. Market entry is as an act in which a firm decides to offer a new or existing product or business model into a new market (c.f., Lieberman and Montgomery, 1988). Entry timing focuses exclusively on how quickly a firm enters a market compared to the market entry timing of the firm's rivals. Further, market entry (either product, business model or geographic market entry) typically refers to a one-time event.

Entry timing dynamics develop through a process that begins with an unspecified environmental change (e.g., a change in the economic or social environment). This change creates new market opportunities for firms to compete as the opportunities evolve continuously in the environment (Schumpeter, 1934). When firms earn profits from capitalizing on these opportunities, other firms are motivated to enter the same market. However, markets are imperfect, so heterogeneity in terms of resources, capabilities and information exists between firms. As a result, some firms (i.e., pioneer or first mover firms) are more proficient at identifying, responding and capitalizing on market opportunities than other firms. In other words, pioneer firms have an initial resource or information asymmetry that allows them to identify and exploit market opportunities before other firms. Early entrant advantages are the benefits that accrue to the pioneer firm (or the first market mover) because of its speed to market. These advantages include higher financial performance or market share, stronger reputation and increased media visibility (Miller et al., 1989; Murthi et al., 1996; Robinson, 1988).

2.2. Theoretical framework of entry timing research

Several authors have attempted to develop a theoretical framework to explain the sources of early entrant advantages, which are the specific mechanisms that allow pioneer firms to gain and protect their early entrant advantages and thus generate higher levels of performance. However, Lieberman and Montgomery's (1988) framework has become the most pervasive. Based on their framework, the primary mechanisms of first or early mover advantages are technological leadership, buyer switching costs and pre-emption of valuable assets (Lieberman and Montgomery, 1988). Specifically, early movers can gain technological leadership by achieving scale economies or by safeguarding their proprietary knowledge (Boulding and Christen, 2008; Lieberman and Montgomery, 1988). Furthermore, early movers may establish brand loyalty as consumers learn about certain offerings and their preferences evolve in a manner that deters switching from the pioneer's product to another product (Carpenter and Nakamoto, 1989, 1994; Gomez and Maicas, 2011). Finally, early movers can also seize profits by pre-empting valuable and scarce resources at the most beneficial price (Boulding and Christen, 2008).

However, early mover advantages appear to be difficult to sustain because of the competitive behavior of late entrants. First, later movers can capitalize on the (1) resolution of uncertainties, (2) discontinuities in the marketplace or (3) incumbent inertia and thereby diminish the advantages earned by the early moving firm (Lieberman and Montgomery, 1988). Later movers can also use their own resources and strategies to obtain market success (Cho et al., 1998; Shamsie et al., 2004). In a similar vein, followers that utilize non-market actions (i.e., litigation) against first-movers can successfully capture market share from them. Most importantly, late entrants may erode the advantages gained by pioneer firms through imitation of the pioneer's products or strategies (De Carolis, 2003; Ethiraj and Zhu, 2008; Lee et al., 2000).

Despite its 30-year history, the entry timing research still relies on the first mover advantages (FMA) framework as its primary

² Under objective performance, we included return on assets, market share and reported earnings. Subjective performance reflects managers' assessment of firm success and performance.

Table 1 Review of the litera	ture on entry timing	and performance in	the IB domain.				
Author(s)	Country of entry	Country of origin	Performance type	Time period	Type of entry	Focal industry	Key findings
Ahlbrecht and Eckert, 2013	Central and Eastern Europe	Germany	Subjective (how well financial and non-financial performance goals were met)	2010-2011	Not specified	Manufacturing	Pioneers show stronger performance than early followers which outperform late entrants.
Вгомп, 2010	Various countries (countries not specifically listed)	Various countries (countries not specifically listed)	Objective (innovation productivity)	2007	Product	Wireless technology	Timing of entry is curvilinearly related to firm innovation productivity with early and late entrants experiencing greater innovation productivity than intermediate entrants.
Delios and Makino, 2003	Asia, North America, and Europe	Japan	Objective (survival and subsidiary size)	1994–1999	Wholly-owned subsidiary	Various	Early entrants have relatively larger size and have greater likelihood of exit (or lower survival chance) than late entrant firms. Those effects are dependent on the ascert advantance noscessed how the firm
Garcia-Villaverde et al 2012	Not listed	Spanish firms	Subjective (profitability)	2008	Product	Communications technology	Early entry leads to stronger performance.
Gomez et al., 2016	19 European countries	Primarily European firms	Objective (EBITDA and market share)	1998–2008	Product	Mobile telecommunications	Market growth and technological discontinuities have a negative effect on the sustainability of first mover advantages as measured by market share and profishility.
Gomez and Maicas, 2011	19 European countries	Primarily European firms	Objective (EBITDA and market share)	1998–2007	Product	Mobile telecommunications	Early market entry has a positive influence on firm market share and profitability.
Isobe et al., 2000	China	Japan	Subjective (profitability)	1996	Joint venture	Manufacturing industries	Early entry leads to improved joint venture performance.
Jakopin and Klein, 2012	49 countries	49 countries	Objective (EBITDA-margin and market share)	2006	Product	Mobile telecommunications services	Early market entry has a positive influence on firm market share and profitability
Kim et al., 2012	40 countries	Japan	Objective (survival)	1986–2002	Wholly-owned subsidiary	Various industries	margın. Early subsidiary entry into a country has a positive influence on subsidiary survival.
Lavie et al., 2007	Various countries (countries not	Various countries (countries not	Subjective (market success)	2004	Strategic alliance	Wireless technology	Order of entry into the alliance has a U- shaped relationship on partners'
	specifically listed)	specifically listed)					productivity (i.e., early and late entry into the alliance have a positive effect on productivity with intermediate levels of entry timing having the worst effect on productivity.)
Leng et al., 2015	China	Various countries (countries not specifically listed)	Subjective (new product performance)	Not listed	Product	High-tech industry	Timing of market entry has a positive effect on new product performance and product quality
Luo, 1998	China	Various countries (countries not specifically listed)	Objective (ROI, sales growth, asset turnover, and risk)	1980–1992	Joint Venture	Light industry sector	FMA are dependent on the performance measure. Early movers into China outperform late movers in terms of market expansion and asset turnover. However, later movers outperform early movers in terms of risk reduction and return on
Luo and Peng, 1998	China			1980–1990 and 1996	Joint Venture	Light industry sector and manufacturing industries	investment.

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Table 1 (continued)

Author(s)	Country of entry	Country of origin	Performance type	Time period	Type of entry	Focal industry	Key findings
		Various countries (countries not specifically listed)	Objective (ROI, sales growth, asset turnover, and risk) subjective (ROS, ROE, sales growth, asset turnover, competitive position, and risk)				There are significant differences between first movers and late entrants depending on the performance measure. First movers perform better than late entrants in terms of sales growth, asset turmover, return on sales and return on equity. Late entrants outperform first movers in terms of return on investment and risk reduction.
Magnusson et al., 2009	43 different countries	43 different countries	Objective (market share)	2001	Wholly-owned subsidiary	Advertising agencies	Service firms are found to possess FMAs. The main relationship between entry order and market share is also dependent on international experience, majority ownership, and GDP erowth.
Malik, 2012	China	Various countries (countries not specifically listed)	Objective (ROA)	2008	Strategic alliance	Various industries	First movers are able to capture performance benefits and those benefits are stronger as market competition increases.
Mascarenhas, 1992	46 various countries	Various countries (countries not specifically listed)	Objective (market share)	1962–1984	Product	Oil industry	First entrants obtain FMA in international markets.
Mascarenhas, 1992	46 various countries	Various countries (countries not specifically listed)	Objective (market share and survival)	1962–1984	Product	Oil industry	First entrants exhibit the highest market share followed by early followers and then late entrants. In terms of survival, first entrants and late entrants out-survive early followers
Mascarenhas, 1997	68 countries	Various countries (countries not specifically listed)	Objective (market share and survival)	1964–1984	Product	Oil industry	First entrants are able to obtain higher market share and better survival in foreign product markets.
McNamara et al., 2008	Various countries (countries not specifically listed)	Various countries (countries not specifically listed)	Objective (cumulative abnormal returns)	1985–2001	Merger or acquisition	Various industries	Entry timing exhibits a U-shaped relationship with market returns. First and last movers into a merger wave outperform firms with intermediate entry position. Industry conditions and acquisition characteristics moderate those effects.
Mohr et al., 2014	Various countries (countries not specifically listed)	Various countries (countries not specifically listed)	Objective (ROS)	1995–2010	Wholly-owned subsidiary	Retail industry	First movers exhibit stronger performance in terms of return on sales.
Murray et al., 2012	China	Various countries (countries not specifically listed)	Objective (market share)	1998–2002	JV and wholly- owned subsidiary	Manufacturing industries	Early movers in China obtain higher market share but lower survival rates than late movers. Those effects are moderated by investment size and entry mode.
Nehrt, 1996	8 different countries	8 different countries	Objective (sales growth)	Mid 1980s to early 1990s	Not specified	Manufacturing industries	There is a negative association between timing of investment and profit growth.
Niu et al., 2013	China	Various countries (countries not specifically listed)	Subjective (sales growth relative to firm goals and competitors)	NA	Product	Various industries	The existence of marketing resources and skills allows early followers to increase their performance. Market intelligence is critical for late entrants to generate positive performance outcomes.
Pan et al., 1999	China		Objective (market share and ROA)	1995		Manufacturing industries	(continued on next page)

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Table 1 (continued)							
Author(s)	Country of entry	Country of origin	Performance type	Time period	Type of entry	Focal industry	key findings
		Various countries (countries not specifically listed)			JV and wholly- owned subsidiary		Early movers have higher market share and profitability than late movers. Mode of market entry moderates the relationship between entry timing and berformance
Tsoua et al., 2009	China	Taiwan	Objective (earnings before taxes)	1991–2005	Foreign direct investment	Various industries	Entry tuning is positively related to performance. In addition, larger firms and firms with greater R&D intensity enter early in a foreign market. Firms operating
Usero and Fernández, 2009	13 European countries	European firms	Objective (market share erosion)	1997–2000	Product	Mobile telecommunications services	in global industries enter a country later. FMA are dependent on the actions of followers. Followers who pursue more market actions, such as innovation and priving are not able to evode the first
							mover advantage of pioneer firms. Follower who pursue more non-market actions, such as litigation and complain, can steal market share from pioneer firms.

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theoretical foundation. Undoubtedly, the FMA framework is attractive and logical, which enhances its appeal to scholars and practitioners. An examination of entry timing decisions in IB contexts complements the traditional FMA framework because it directs scholars towards additional factors and mechanisms that facilitate or prevent firms from obtaining FMA. In particular, entry decisions into a foreign market or country may entail employing unique resources and capabilities, interacting with a different set of competitors and local governments, managing diverse cultural perceptions and attitudes, and/or incurring different or additional costs compared to entry into a home market or country (North, 1990; Porter, 1990).

3. Review of IB entry timing research

3.1. Entry timing-firm performance relationship

IB scholars have dedicated most of the entry timing research towards understanding the performance implications of the entry timing decision (i.e., is there a benefit to being first to enter a new international market?) (see Table 1).

Our review of the literature revealed that the findings are equivocal. On the one hand, some studies find a positive relationship between entry timing and various measures of firm performance (Jakopin and Klein, 2012; Kim et al., 2012; Malik, 2012; Mohr et al., 2014; Nehrt, 1998; Tsoua et al., 2009; Usero and Fernández, 2009). For example, MNCs experience a market share and financial performance advantage if they enter China earlier than other firms (Isobe et al., 2000; Malik, 2012; Pan and Chi, 1999; Pan et al., 1999). Similarly, early MNC entrants experience higher financial returns as they compete across multiple geographic regions of their retail operations (Mohr et al., 2014). Early entry has a positive effect on survival among foreign subsidiaries of Japanese firms (Kim et al., 2012). Further, based on subjective measures of performance, Song et al. (1999) found that managers *perceive* pioneering to be associated with higher market share and profitability in a study across nine countries and regions.

On the other hand, some IB scholars have found a curvilinear or negative relationship between entry timing and firm performance. For example, in the global wireless technology industry, entry timing is curvilinearly related to firm innovation productivity with early and late entrants experiencing greater innovation productivity than intermediate market entrants (Brown, 2010). Similarly, entry order into a strategic alliance has a U-shaped relationship on partners' productivity (Lavie et al., 2007). Relatedly, evidence from the global oil rig industry suggests that first movers and late entrants out survive early followers (Mascarenhas, 1992). In contrast, Delios and Makino (2003) find that early entry into a foreign market by Japanese firms is associated with a lower survival likelihood. Utilizing different measures of performance, Luo (1998) and Luo and Peng (1998) show that early entrants in China compared to late movers experience reduced accounting performance and face greater operational risks.

3.2. Moderators and mediators of the entry timing-firm performance relationship

We note that the relationship between entry timing and firm performance is sometimes dependent on the country or culture of context. For instance, Western managers perceived the cost advantages of early entry to be more important than managers from Asia Pacific (Song et al., 1999). Similarly, others found that the early entrants advantages are stronger in the United States than other international locations (Mascarenhas, 1992). Furthermore, some studies argue that a country's degree of institutional development and legal arrangements are key factors that impact the ability of pioneering firms to capture FMA. For example, early entrants can face considerable uncertainty and difficulties when they interact with inexperienced local governments that are still learning how to deal effectively with foreign partners. Also, many of the local firms are state-owned enterprises, which allows them to change and manipulate existing rules in their favor, "thus creating further transaction hazards for early investors from abroad" (Luo and Peng, 1998: 146; Puffer, 1994).

IB scholars have found that firm level factors can also act as a moderator or mediator of the entry timing-firm performance relationship. Pan et al. (1999) provide evidence that entry timing interacts with entry mode choice to predict market share. Specifically, foreign firms that entered China later through wholly-owned subsidiaries or equity joint ventures have lower market share (Pan et al., 1999). Based on a sample of advertising firms across forty-three developing markets in Asia, Europe and Latin America, firms' international experience and size moderate the entry-timing firm performance relationship (Magnusson et al., 2009). Early market entrants with more international experience and early entrants that are larger in size gain higher levels of market share (Magnusson et al., 2009). Finally, based on a sample of firms across Europe, switching costs mediate the relationship between entry timing and firm performance (Gomez and Maicas, 2011). Switching costs protect early entrants from losing their advantages to late market entrants.

3.3. Countries, industries, and types of entry

Within the IB entry timing research, scholars have studied entry timing across diverse countries of entry and origin, including countries in North America (Delios and Makino, 2003), Latin America (Magnusson et al., 2009), Europe (Gomez and Maicas, 2011; Usero and Fernández, 2009) and Asia (Murray et al., 2012; Tsoua et al., 2009). Research has also covered a broad range of industries, such as technology (Gomez and Maicas, 2011; Lavie et al., 2007; Leng et al., 2015), retail (Mohr et al., 2014), manufacturing (Murray et al., 2012) and advertising (Magnusson et al., 2009). Finally, firms have relied on various approaches to enter a foreign market – some have used products (Gomez and Maicas, 2011; Jakopin and Klein, 2012; Leng et al., 2015), joint ventures (Isobe et al., 2000; Luo, 1998), wholly-owned subsidiaries (Kim et al., 2012; Magnusson et al., 2009) or strategic alliances (Lavie et al., 2007; Malik, 2012).

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3.4. Time period and measures of performance

Our review revealed that IB scholars have examined the effects of entry timing over an extended period of time with a strong representation of studies utilizing data from the 1990s (Delios and Makino, 2003; Luo, 1998; Luo and Peng, 1998) and the 2000s (Lavie et al., 2007; Magnusson et al., 2009; Malik, 2012). With regards to measures of performance, IB scholars have utilized a diverse set of variables to assess the performance consequences of entry timing. Among the objective measures of performance, scholars have used accounting measures, such as return on assets (Malik, 2012), return on sales (Mohr et al., 2014), sales growth (Nehrt, 1996), and earnings before tax (Tsoua et al., 2009). Among market measures, scholars have used cumulative abnormal returns (McNamara et al., 2008), market share (Gomez and Maicas, 2011; Murray et al., 2012; Pan et al., 1999) and survival. In addition, scholars have relied on subjective measures of performance via surveys of managers' assessment of entry timing success and profitability (Isobe et al., 2000; Lavie et al., 2007; Song et al., 1999).

4. Meta-analytic foundation

Overall, our review identified a rather nuanced picture of the relationship between entry timing and firm performance. The existence of potential benefits and disadvantages associated with early entry into an international market necessitates a thorough empirical analysis to conclude whether first mover advantages are prevalent in IB. To that end, we conduct a meta-analysis on the relationship between entry timing and firm performance. While our main objective is to examine the presence or absence of FMA in IB contexts, it is also important to examine specific contingencies under which the main relationship is strengthened or attenuated. Hence, we also conduct moderation analyses of the main relationship.

Our review of the literature revealed that entry in a foreign market is viewed as multi-level phenomena. This view is consistent with prior research in IB and strategic management that theorizes on the multi-level nature of managerial decision-making and performance (Crossland and Hambrick, 2007; Crossland and Hambrick, 2011; Misangyi et al., 2006). Thus, we examine how various factors residing at the country-, industry-, firm- and time-level of analysis moderate the entry timing-performance relationship. First, due to different institutional regimes, legal arrangements and national culture, country can have a varying impact on strategic decisions and their outcomes (Berry and Kaul, 2016; Lu and Beamish, 2001). In this meta-analysis, the country-level factors we examine are country of entry and origin.

Second, prior research has argued and found support that industry conditions exhibit differentiated impact on firms. Since different industries are characterized by different degrees of competition, regulations and capital requirements (Lovelock and Yip, 1996; Terrill, 1992), they can either facilitate or hinder the pursuit of FMAs. At the industry-level, we examined how type of industry (service vs. manufacturing) moderates the relationship between entry timing and firm performance.

Third, firm resources and preferences for how to enter a foreign market are also likely to impact cross-border decisions. Since firms have different levels of resource availability and exhibit different degrees of risk tolerance (e.g., Kirca et al., 2011), we expect the firm's choice of entry type to have a strong impact on the entry timing-performance relationship. In particular, we examine the moderating impact of type of market entry (product entry vs. joint venture, strategic alliance or wholly-owned subsidiary).

Finally, past research provides evidence that the impact of strategic actions on firm performance varies over time (e.g., Kolev, 2016; Quigley and Hambrick, 2015) and across different types of performance. Hence, we examine whether the relationship between entry timing and performance changes across time periods. We also tested whether the main relationship under investigation varies for different types of performance (objective vs. subjective) (e.g., Hughes-Morgan et al., 2018; Kirca et al., 2011; Post and Byron, 2015).

We acknowledge that the selection of the moderating factors is partially driven by the availability of prior empirical studies. As a rule of thumb (King et al., 2003; Sleesman et al., 2012), we needed at least three separate studies to conduct the moderation analyses in order to develop a meaningful and relevant comparison of the main relationship across different moderating conditions.

4.1. Meta-analytic methodology

For the meta-analysis, we conducted a review of the empirical studies of the entry timing-firm performance research in IB domains covering the period from 1988 to the present. We used 1988 as the beginning cut-off year so that our review begins with the seminal article by Lieberman and Montgomery (1988) on first mover advantages. Our search involved several steps. First, we searched for relevant articles in two databases, ABI Inform and ProQuest, using the following keywords: *first mover advantage, pioneer advantage, entry order, timing of entry, first movers, first entrants, late movers and late entrants*. Second, we examined the reference lists of potentially applicable articles for additional studies that might not have been identified through the initial search. We focused exclusively on full-length articles and excluded books and book chapters. We examined published articles as well as unpublished work, such as working papers and dissertations. Prior research suggests that inclusion or omission of unpublished work does not lead to serious concerns regarding the validity of conclusions drawn from meta-analyses (Dalton et al., 2011). Utilizing published and unpublished work allowed for broader representation of existing work on entry timing and FMA. Overall, we found 20 published articles and 1 dissertation that provided the necessary information to statistically estimate the relationship between entry timing and performance. As a result, our meta-analysis is based on 21 independent studies, 22 separate samples and a total number of observations of N = 141,686 (please see Table 2).

We identified a larger number of studies discussing FMA; however, we excluded a portion of them for several reasons. First, some studies were theoretical in nature and thus unusable for a meta-analytic approach. Second, other studies lacked necessary data, such

Table 2

Studies used in the meta-analysis.

Brown, K. D. 2010. Differential benefits to firms participating in multipartner collaborative innovation. The University of Utah.

Delios, A., and Makino, S. 2003. Timing of entry and the foreign subsidiary performance of Japanese firms. Journal of International Marketing, 11(3): 83–105. Garcia-Villaverde, P., Ruiz-Ortega, M., and Parra-Requena, G. 2012. Towards a comprehensive model of entry timing in the ICT industry: direct and indirect effects. Journal of World Business, 47: 297–310.

Gomez, J., Lanzolla, G., and Maicas, J. P. 2016. The role of industry dynamics in the persistence of first mover advantages. Long Range Planning, 49: 265–281. Gomez, J., and Maicas, J. 2011. Do switching costs meditate the relationship between entry timing and performance? Strategic Management Journal, 32: 1251–1269.

Isobe, T., Makino, S., and Montgomery, D. 2000. Resource commitment, entry timing and market performance of foreign direct investments in emerging economies: The case of Japanese international joint ventures in China. Academy of Management Journal, 43(3): 468–484.

Jakopin, N. M., and Klein, A. 2012. First-mover and incumbency advantages in mobile telecommunications. Journal of Business Research, 65: 362–370.
Kim, Y., Lu, J. W., and Rhee, M. 2012. Learning from age difference: interorganizational learning and survival in Japanese foreign subsidiaries. Journal of International Business Studies. 43: 719–745.

Lavie, D., Lechner, C., and Singh, H. 2007. The performance implications of timing of entry and involvement in multipartner alliances. Academy of Management Journal, 50: 578–604.

Leng, Z., Liu, Z., Tan, M., and Pang, J. 2015. Speed leaders and quality champions: analyzing the effect of market orientation and technology orientation alignment on new product innovation. Management Decision, 53: 1247–1267.

Luo, Y. 1998. Timing of investment and international expansion performance in China. Journal of International Business Studies, 29(2): 391-407.

Luo, Y., and Peng, M. 1998. First mover advantages investing in transitional economies. Thunderbird International Business Review, 40(2): 141-163.

Magnusson, P., Westjohn, S. A., and Boggs, D. J. 2009. Order-of-entry effects for service firms in developing markets: an examination of multinational advertising agencies. Journal of International Marketing, 17: 23–41.

Malik, T. 2012. First mover, strategic alliances and performance: context of turmoil in China. Chinese Management Studies, 6: 647-667.

McNamara, G., Haleblian, J., and Dykes, B. 2008. The performance implications of participating in an acquisition wave: early mover advantages, bandwagon effects and the moderating influence of industry characteristics. Academy of Management Journal, 51(1): 113–130.

Mohr, A., Fastoso, F., Wang, C., and Shirodkar, V. 2014. Testing the regional performance of multinational enterprises in the retail sector: the moderating effects of timing, speed and experience. British Journal of Management, 25: 100–115.

Murray, J., Ju, M., and Gao, G. 2012. Foreign market entry timing revisited: trade-off between market share performance and firm survival. Journal of International Marketing, 20(3): 50–64.

Nehrt, C. 1996. Timing and intensity effects of environmental investments. Strategic Management Journal, 17: 535-547.

Pan, Y., Li, S., and Tse, D. 1999. The impact of order and mode of market entry on profitability and market share. Journal of International Business Studies, 30(1): 81–104.

Tsou, S., Yu, J., and Lin, Y. 2009. Entry timing and performance under uncertainty: Taiwanese firms investing in China. Asia Pacific Management Review, 14(3): 263–277.

Usero, B., and Fernandez, Z. 2009. First come, first served: how market and non-market actions influence pioneer market share. Journal of Business Research, 62: 1139–1145.

as correlation coefficients, to be meta-analyzed. Third, a set of studies examined entry timing in the context of a single country which is outside the scope of our research. Finally, we eliminated several studies because they examined how past performance impacted entry timing rather than the performance effects of entry timing. The two authors coded all articles and any discrepancies were resolved through discussions.

4.2. Meta-analytic procedures

Meta-analysis is a technique used to estimate the true relationship between two variables from different samples. The obtained effect size is a mean correlation coefficient that is derived from the correlation coefficients from all samples by weighting each study's sample size. The obtained correlation coefficient offers a more accurate estimation of the population mean since different statistical artifacts are corrected and sampling errors are eliminated (Hunter and Schmidt, 1990). In this meta-analysis, we relied on correlation coefficient r to estimate effect sizes because it provides easy interpretation and small downward bias (Aguinis et al., 2011; Geyskens et al., 2009). A key feature of a meta-analysis is the calculation of standard errors that are used to create confidence intervals (CI) (Whitener, 1990). If the CI for a given correlation coefficient does not include zero, it indicates the existence of a statistically significant relationship between the variables under investigation.

To conduct our meta-analytic review, we relied on Hunter and Schmidt's psychometric analytic procedure (Hunter and Schmidt, 1990, 2004). It utilizes a random-effects model which is preferred for meta-analyses because it assumes that population effect sizes vary across samples and provides an appropriate Type I error rate (Geyskens et al., 2009; Kepes et al., 2012). In line with recommendations from Hunter and Schmidt (1990), we addressed additional artifacts, such as measurement error, dichotomization of a truly continuous variable, and range restriction in the following manner: (1) since no reliability statistics were provided for our independent and dependent variables, we relied on a reliability level of 0.8 (Dalton et al., 1999); (2) we used no studies in our metaanalysis that included a dichotomization of a truly continuous variable and (3) range restrictions were set at 1 (Lee and Madhavan, 2010).

Some scholars have expressed concerns about the non-independence in meta-analyses and the impact of pooling multiple correlations from a single study (Lee and Madhavan, 2010). We followed prior research to address this issue (Kolev, 2016). First, if a single study reported multiple correlations between various entry timing measures and various performance measures, we averaged those correlations to obtain a single effect size. Second, as a robustness check we used only one correlation coefficient or all correlation coefficients from a study and obtained similar results (Geyskens et al., 2009).

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Table 3

Meta-analytic results of the relationship between entry timing and performance.

Variable	Ν	k	r	ρ	SD	95% CI		90% CV	
Entry timing – performance	141,686	22	0.08	0.10	0.12	0.05	0.15	-0.06	0.25
Entry into China	41,127	9	0.15	0.18	0.06	0.14	0.22	0.11	0.26
Entry into Europe	3480	3	0.46	0.58	0.18	0.38	0.78	0.35	0.81
Origin of firms – Europe	3712	4	0.46	0.57	0.17	0.40	0.74	0.35	0.79
Origin of firms – Asia	91,697	4	0.03	0.03	0.02	0.01	0.06	0.00	0.06
Service firms	4701	6	0.43	0.53	0.17	0.40	0.67	0.32	0.75
Manufacturing firms	42,127	11	0.15	0.19	0.07	0.15	0.24	0.10	0.28
Entry via products	5112	7	0.42	0.52	0.17	0.40	0.65	0.31	0.74
Entry via JV, subsidiary, alliance	136,524	14	0.07	0.08	0.08	0.04	0.13	-0.03	0.19
Data from 1990s	21,834	6	0.09	0.11	0.03	0.09	0.13	0.08	0.14
Data from 2000s	1729	6	0.31	0.38	0.11	0.29	0.48	0.25	0.52
Objective performance	140,551	17	0.08	0.09	0.12	0.04	0.15	-0.06	0.25
Subjective performance	1135	5	0.33	0.41	0.05	0.34	0.48	0.34	0.48

5. Results

Table 3 provides the results of our meta-analytic review of the performance effects of entry timing in the IB domain.

Overall, we found that the coefficient between entry timing and performance is positive ($\rho = 0.10$, k = 22, N = 141,686, CI 0.05:0.15). Because the CI does not include zero, we can conclude that early entry generates significant performance advantages. Stated differently, first movers outperform rivals that enter later in a foreign market.

Turning the attention to the moderation analyses, we found some interesting results. First, we examine the moderating effect of country of entry. The available data allowed us to compare firms that entered China with firms that entered Europe. We found that entering China early led to significant financial benefits ($\rho = 0.18$, k = 9, N = 41,127, CI 0.14:0.22). Similarly, early entry into Europe generated FMA ($\rho = 0.58$, k = 3, N = 3480, CI 0.38:0.78). A moderation analysis allows researchers to compare subsamples (e.g., entry into China vs. entry into Europe) and establish whether effects sizes for each subsample are statistically different from each other. To that end, it is necessary to examine the CI of the two subsamples. If those CI do not overlap, then there are significant differences between the subsamples. Looking at the subsample for entry into China, the upper bound of the CI is 0.22. For the subsample of entry into Europe, the lower bound of the CI is 0.38. Because the CI of the two subsamples do not overlap and the effect size for the Europe subsample is larger than the effect size for the China sample, we can conclude that first movers in Europe outperform first movers in China.

When looking at country of origin as a moderator, we found that pioneers from Europe that enter a foreign country obtain significant performance benefits ($\rho = 0.57$, k = 4, N = 3712, CI 0.40:0.74). Pioneers from Asia that enter foreign markets also gain first mover advantages ($\rho = 0.03$, k = 4, N = 91,697, CI 0.01:0.06). Again, since the CI of these two subsamples do not overlap and the effect size for the Europe subsample is larger than the effect size for the China sample, we can infer that European pioneers outperform Asian pioneers.

Next, we examine the moderating role of industry type. The results indicate that first mover advantages exist for both service firms ($\rho = 0.53$, k = 6, N = 4701, CI 0.40:0.67) and manufacturing firms ($\rho = 0.19$, k = 11, N = 42,127, CI 0.15:0.24). The CI do not overlap and we can conclude that firms in service industries exhibit stronger first mover advantages.

Type of entry appears to have a strong impact on the entry timing-performance relationship. We found that when first movers relied on a product to enter a country ($\rho = 0.52$, k = 7, N = 5112, CI 0.40:0.65), they performed much better than when first movers utilized joint ventures, wholly-owned subsidiaries or strategic alliances as their entry choice ($\rho = 0.08$, k = 14, N = 136,524, CI 0.04:0.13). Stated differently, the decision to enter a foreign country early via product appears to be the most successful value-generating strategy.

We compared whether FMA differed by time period. In particular, we examined samples from the 1990s and 2000s. Results showed that first mover advantages in the 2000s ($\rho = 0.38$, k = 6, N = 1729, CI 0.29:0.48) were stronger than those in the 1990s ($\rho = 0.11$, k = 6, N = 21,834, CI 0.09:0.13).

Finally, regarding types of performance, we found that first mover advantages existed when performance was measured both objectively ($\rho = 0.09$, k = 17, N = 140,551, CI 0.04:0.15) and subjectively ($\rho = 0.41$, k = 5, N = 1135, CI 0.34:0.48). The two confidence intervals did not overlap and we can conclude from the results that entry timing effects are more pronounced for subjective measures of performance.

6. Theoretical and managerial implications

The findings in our meta-analysis provide some important implications for existing theory and practice. In particular, we confirm the beneficial effects of early entry outlined in the classic FMA framework (Lieberman and Montgomery, 1988) and provide solid support for the framework's applicability across national boundaries. By building technological leadership, installing buyer switching costs, pre-empting valuable assets, securing favorable relationships with local governments and/or taking advantage of countries' institutional regimes (Lieberman and Montgomery, 1988; Luo, 1998; Malik, 2012), first movers in foreign markets increase their

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firm's performance. The results in this meta-analysis also warrant a contingent perspective on FMA. Consistent with prior research on the multi-level nature of cross-border decisions (Lu and Beamish, 2001), we show that factors residing at the country-, industry-, firm-, and time-level of analysis have a strong impact on whether firms can obtain larger or smaller FMA.

We also see some managerial implications from our meta-analysis. Given that international expansion is one of the main ways to generate firm growth (cf., Hoffman et al., 2016), it is critical for managers to accurately assess the timing of entry into foreign markets. Unless they are one of the first entrants in a market, managers and their firms are better off resisting late entry, which brings more costs and losses than financial gains. Even if firms can be first movers, it is very important to choose where, when, and how to enter. All other things being equal, our results suggest that managers should choose early entry into Europe over early entry into Asia. Further, firms from Europe, when competing with firms from Asia, should choose early market entry strategies. Similarly, managers can extract greater value when relying on products to enter a foreign market compared to any other entry modes, such as a joint venture or strategic alliance. Finally, a large number of multinational firms are diversified corporations, which suggests that they can simultaneously operate in different industries, such as service and manufacturing. Given a firm's limited resources, including financial resources as well as managerial attention and time, it is advisable that firms prioritize early entry into service industries over manufacturing industries.

7. Avenues for future research

Drawing on the literature review and findings from our meta-analysis, we offer several avenues for future research. First, we suggest that IB scholars examine the entry timing-firm performance relationship across a broader selection of countries. Our metaanalytic review revealed overreliance on studies based on entry into China which may be creating a sampling bias in the empirical results. We encourage more entry timing research in countries in Latin America, Africa, the Middle East and other countries in Asia. Further, it may be interesting to examine whether early entrant advantages exist for firms from developed countries that enter developing countries and vice versa. Alternatively, it may be interesting to examine entry timing decisions within and across international trading blocks, such as the European Union.

Second, our findings that service firms have stronger first mover advantages than manufacturing firms might be somewhat surprising. Many have argued that first mover advantages are especially prevalent for manufacturing firms because economies of scale, learning curve effects and protection of intellectual property rights are less attainable for service firms (Lovelock and Yip, 1996; Stevens et al., 2015; Terrill, 1992). Yet, the results in this meta-analysis suggest that other factors might be more important for securing first mover advantages. For example, service firms rely more extensively on human capital than manufacturing firms (e.g., Griffith and Lusch, 2007). Indeed, "the preemption of host-country human resources, through acquisition of talent and establishment of influential local contacts, is especially important for success in service industries, and early entrants have an advantage at securing the best local human resources, (Magnusson et al., 2009: 26). While this insight might be especially relevant for developed countries with skilled human resources, future research should examine whether first mover advantages for service firms persist in developing and developed economies based on the preemption of human capital.

Third, we found that pioneers that rely on products to enter a market achieved stronger performance compared to pioneers entering through joint ventures, wholly-owned subsidiaries, or strategic alliances. This finding suggests that first movers via joint ventures, wholly-owned subsidiaries, or strategic alliances might incur higher risks and additional costs of organizing and setting up operations in the foreign market that prevent them from obtaining strong benefits compared to first movers relying on product entry. Pan et al. (1999) have made strides in this area of research by evaluating the interaction of entry timing and entry mode and the impact that this interaction may have on firm performance in China. We encourage IB scholars to continue this line of inquiry by examining how the interaction between entry mode and entry timing may vary across various country conditions.

Fourth, we note relatively limited moderators and mediators of the entry timing-performance relationship in IB entry timing research (for an exception, see Garcia-Villaverde et al., 2012; Gomez and Maicas, 2011; Li et al., 2003). This finding is troubling given that many scholars argue that the direct effect of entry timing on performance is likely subject to numerous contingencies (Kerin et al., 1992; Zachary et al., 2015). In particular, we propose that the distinction between home and host country conditions (e.g., political, economic or competitive conditions) is one of the major opportunities for IB scholars to contribute uniquely to the contingencies of the entry timing-performance relationship (cf., Magnusson et al., 2009). For example, if firms have a desire to preempt a valuable resource, and thus gain early entrant advantages, they are heavily dependent on that country's institutional intermediaries that facilitate the flow of information regarding the availability of valuable resources (Khanna et al., 2005). For future research, scholars could compare the ability of firms to pre-empt valuable resources in the context of different information or institutional intermediaries across countries (cf., De Lange, 2016). Further, early entrant advantages hinge on institutions that support patents, trademarks and intellectual property rights (IPR). However, variance exists across countries in terms of their legal and regulatory environments (cf., La Porta et al., 2000), which may have varying effects on FMA. The implication for future research is that opportunities exist to examine how the legal and regulatory sophistication of the host country may impact the pioneer's products or services.

In addition to contingencies at the country level, we envision additional firm characteristics and resources to moderate the relationship between entry timing and performance. For example, it would be interesting to examine in greater details the contingent role of prior entry experience. It is logical to expect that a firm with multiple first mover experiences to have gained valuable lessons and skills that could be applied successfully to subsequent entry timing decisions. Yet, it is important to acknowledge that prior experiences might be context or time specific and thus too different to be relied upon in future entry decisions. In other words, firm managers should be wary of falling prey to generalizations from past experiences in guiding their subsequent entry timing choices

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(e.g., Haleblian and Finkelstein, 1999).

Fifth, we note an emphasis on studies that focus solely on the benefits of early market entry with limited studies in IB entry timing research that examine late entrants (c.f., Shamsie et al., 2004; Usero and Fernández, 2009) or the role of imitation (c.f., Lieberman and Asaba, 2006) in diminishing early entrant advantages. A more comprehensive evaluation of the entry timing-firm performance relationship needs to consider early and late entry and their associated outcomes. One possible area of future research is to examine imitation more closely in an IB context. In such a context, imitation by late entrants may be more complex than currently assumed because the first mover may have foreign origins relative to the late entrant. The implication is that the first mover's products, strategies, etc. may have higher levels of causal ambiguity (cf., Reed and DeFillippi, 1990) due to country differences in firm technologies, organizational routines and top management team knowledge bases. Further, in unfamiliar competitive environments, late entrants may be unclear about which pioneer firms serve as their reference group (cf., Li and Yao, 2010). Therefore, imitation by late entrants in foreign market entry may be less of a viable source of competitive advantage than currently assumed in existing research (Lieberman and Asaba, 2006), which presents an avenue for future research.

Sixth, we identified important methodological issues and opportunities with IB entry timing research. First, we noted limited discussion of the survivor bias in IB entry timing samples (Lieberman and Montgomery, 2013; Vidal and Mitchell, 2013). The survivor bias suggests that entry timing samples inherently reflect firms that survive the entry period and ignores firms that may have exited or failed. Further, we were surprised to see that the majority of IB entry timing research has not utilized multilevel modeling. This is an important omission since IB research inherently encompasses multiple levels of analysis. Without recognizing and addressing those issues through appropriate study design and methodological approaches (e.g., HLM technique), the empirical findings might be less accurate and even lacking empirical validity (c.f., Ozkaya et al., 2013). Finally, in a methodological advancement, IB scholars have developed the construct of first mover orientation (FMO). FMO is a five item construct that assesses how likely a firm will become the first market entrant (Tuppura et al., 2007). Accumulated firm experience predicts FMO based on a sample of Finnish firms across eight industries (Tuppura et al., 2008). For future research, IB scholars could examine the relationship between FMO and firm performance across different country contexts.

Finally, the IB entry timing research still relies on the first mover advantages (FMA) framework as its theoretical foundation. Overreliance on FMA could be problematic given that some have argued that the inconsistent findings in the entry timing research, particularly the findings regarding the relationship between entry timing and performance, may be due to the theoretical deficiencies of the FMA framework (Fosfuri et al., 2013; Zachary et al., 2015). Among other things, these deficiencies include issues with the definition of a first mover, the appropriate measure of the first mover advantage, and specification of the industry or market of focus (Lieberman and Montgomery, 2013). Consequently, we encourage IB scholars to evaluate the entry timing-firm performance relationship using additional theoretical lenses. For example, we identified one paper that used resource dependence theory (Pfeffer and Salancik, 1978). In this paper, the authors discuss how multinational firms sometimes depend upon government involvement in order to gain and sustain early entrant advantages (Frynas et al., 2006). Relatedly, research on FMA in IB context needs to recognize the importance of the CEO and top executives, who are mainly responsible for entry timing decisions. In particular, we urge future research to draw on the Upper Echelon Perspective (Hambrick and Mason, 1984) and explore the role of individual values, cognitions and experiences on the timing of entry into an international market. Considering that CEO hubris can undermine decision quality (Hayward and Hambrick, 1997), it would be interesting to examine whether firms managed by hubristic CEOs can underestimate the risks of early entry into an international market and even experience first mover disadvantages.

8. Conclusion

For decades, scholars have studied entry timing decisions and their impact on firm performance. However, collectively, the entry timing-firm performance research in the IB domain is an area of study with mixed empirical results. Therefore, the purpose of this meta-analytic review was to evaluate whether first mover advantages really exist in international business. Our findings suggest that the answer to this question is "yes," but with important moderating conditions. Our results also point to several areas for additional research. We hope our work stimulates more empirical and theoretical study of entry timing decisions in ways that inform and expand the study of entry timing decisions in the international marketplace.

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