IMPORTANT DETERMINANTS OF FOREIGN COMPANY PERFORMANCE IN CHINA: BIG DATA ANALYSIS

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ABSTRACT

Foreign market entry is important in market development. We examine entry timing/mode, investment, advertising, location and interactive effects. Early entrants enjoy a high market share. The type of entry and initial investment also affect performance. Even though the effect of advertising on market share is significant, regardless of early/late entry, the effect is different, based on entry mode, investment and industry. The effect of advertising is larger on wholly owned subsidiaries. Non manufacturing firms benefit more from advertising compared to manufacturing firms. Multinationals in manufacturing industries investing in Middle/Northeast China perform better, while non-manufacturing multinationals perform better in Eastern China

Key words: performance, entry timing/mode, investment, advertising.

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INTRODUCTION

Multinational firms are always faced with three questions when considering international expansion: which market to enter (entry location), how to enter it (entry mode), and when to enter it (entry timing). In previous studies, researchers have mainly focused on the first two questions, especially mode of entry (Anderson & Gatignon, 1986; Dikova & Van Witteloostuijn, 2007; Wei, Liu & Liu., 2005; Pan & David, 2000). Entry timing, on the other hand, also plays a significant role in the performance of multinational firms' overseas subsidiaries (Murray, Ju & Gao, 2012; Cui & Lui, 2005). In recent years, China has increasingly attracted worldwide attention. According to the World Investment Report 2016, China has an FDI of $135.6 billion, second only to the US. China opened its market to the world in 1979; however, compared to the US, China is still considered an emerging market. Entry timing will have a more significant effect on the performance of foreign firms in China than it would for the same firms entering a developed market. Thus, the timing of entering the Chinese market is essential for multinational firms to consider (Isobe, Makino & Montgomery, 2000; Gaba, Pan & Ungson, 2002; Papyrina, 2007; Tan & Liu, 2007; Murray et al., 2012; Cui & Lui, 2005; Luo & Peng, 1998).

In this study, the factors affecting a foreign firm’s market share performance and profitability are examined. The following determinants (factors) are considered: the point in time that a foreign firm enters a foreign market, the entry mode a foreign firm adopts to enter a foreign market (wholly owned subsidiaries, equity joint ventures, contractual joint ventures), the level of advertising intensity the firm adopts, location the firms decide to invest in as well as the investment size a firm undertakes when entering the foreign market (Pan, Li & Tse, 1999; Delios & Makino, 2003; Papyrina, 2007; Stalk & Hout, 1990; Vesey, 1991). This study aims to provide firms with a clear view of the critical factors involved when entering a foreign market by examining the effect of the previously noted determinants on firm performance.

Although a firm’s competitiveness in a foreign market is largely based on the assets it owns, early market entry provides firms with an opportunity to attain first-mover advantages and thus, to sustain a leading position (Delios & Makino, 2003; Lieberman & Montgomery, 1998). Furthermore, in a foreign market, competition does not exist only between foreign firms, but also between foreign firms and domestic firms. Foreign firms are required to acknowledge and assimilate local market information to achieve competitiveness. Consequently, early entry provides firms with sufficient time for gaining this knowledge. In this study, we hypothesize that early entrants will achieve a higher market share performance than followers.

Early entry timing only is not a sufficient approach for firms to fully make use of first-mover advantages. Entry mode is another critical factor that affects a firm’s performance. However, only a small number of research papers have examined this factor; furthermore, there is no agreement about which type of entry mode achieves higher market share performance (Woodcock, Beamish & Makino, 1994). In this study, based on the database provided by State Statistical Bureau of China and made available to us, there are primarily three types of entry mode: equity joint ventures, contractual joint ventures, and wholly owned subsidiaries. We hypothesize that wholly owned subsidiaries will have higher market share performance than any other type of entry mode since using wholly owned subsidiaries as the preferred method for entering a foreign market provides foreign firms with a high level of ownership. This enables them to easily copy and apply to the host market what they have successfully affected in their home market.

There are also interactive effects between the above-discussed factors. Early entrants adopting different entry modes perform differently in foreign markets. Papyrina (2007) argues that entry timing and entry mode have a joint effect on a foreign firm’s market share performance. Therefore, in this study, interactive effects are also examined. As such, early entrants with large investments entering the foreign market as wholly owned subsidiaries will achieve better performance. Additionally, a firm adopting a high level of advertising intensity will perform better in the market.

In this study, market share performance is examined. We hypothesize that early entrants will have higher market share performance than late entrants. Firm location, a significant factor that needs to be considered when investing aboard, is also examined in the research. We hypothesize that manufacturing and non-manufacturing firms intend to choose different regions in which to invest. (Wei et al., 2005) Thus, the government should pay attention to developing all regions.

This study contributes to the existing literature in three ways. First, it tests the impact of entry timing on firms’ foreign market performance using a larger database than Murray et al. (2012). The period of data Murray et al. (2012) used is from 1998 to 2002, but in this study, the data from ranges from 1998 to 2013. Secondly, this study observes entry mode, investment size, firm location, and advertising intensity as four critical factors that can affect the way in which a firm enters a foreign market. Furthermore, interactive effects among the above factors are examined. Finally this study contributes to strategic choice perspective information by including advertising intensity.

There are three main limitations to this study. Firstly, the data employed in this study ranges from 1998 to 2013, which is not the entire period since China opened its market to foreign investors in 1979. Secondly, the data is archival, and as such, we cannot draw out the motivations of foreign firms for investing in the Chinese market (Murray et al., 2012). The reason for this is that the motivation of foreign investment is difficult to reflect using numeric data. Thirdly, the data used in this study pertains only to China and was taken from Chinese sources. Different countries have different conditions for foreign companies; thus, the results based on Chinese sources may not apply to all countries.

To summarise, this study aims to answer the following questions:

1. What are the effects of entry timing, entry mode, investment size, firm location, and advertising intensity on market share performance, and how do these factors affect the market share performance of firms? Are there any interactive effects among these four factors, and if so, how do they affect market share performance?
2. What should early entrants do to achieve better market performance?
3. What should the government do to balance the economic differences between various regions in China?

LITERATURE REVIEW

The Impact of Foreign Investment on The Chinese Economy

Since the market reform began in 1978, China has grown tremendously. China’s success is due to foreign investment among other factors (Zhang, 2001). There is evidence that FDI has reduced poverty in China by promoting economic growth (Zhang, 2006). Also, FDI has introduced advanced technology, management experience, and new industries. (Shen, 1998; Zhao & Zhang, 2007). According to the World Investment Report, China has received FDI inflows of 136 billion dollars in 2016 which is the second largest in the world. The following numbers indicate the contribution and significance of FDI to the Chinese economy: FDI flows constituted nearly 5% of gross fixed capital formation; foreign-invested companies have produced 21.5% of total industrial output and count for 43% of China’s exports in 2016 (China Statistical Yearbook, 2016; World Investment Report, 2016). The majority of FDI in China came from Hong-Kong and Taiwan and is primarily motivated by cheap labour, incentive policies and market access along with other operational advantages over other investors (Zhang, 2001). Tao (2004) also considers Macao to be a major investor in China.

Zhang (2001, 2006) suggests that the impact of FDI on the Chinese economy is two-fold: first it is the undeniable effects of foreign investment on economic growth through direct effects (such as raising productivity and promoting export) and secondly the role of foreign investment in promoting transition to a market oriented economy and diffusing technology. Zhang (2006) calls this positive externality effects. This is briefly discussed at the end of this section. From an economic growth perspective, neoclassical theories point out that FDI is usually the power train of a host country’s economy because ‘i) inward FDI may enhance capital formation and employment augmentation; ii) FDI promotes manufacturing exports; iii) FDI brings into host economies special resources such as management know-how, the access of skilled labour to international production networks, and established brand names; and iv) FDI may result in technology transfers and spillover effects’ (Markusen & Venables, 1999). For example, as shown in Table 1, exports by foreign-invested firms in 2016 are ten times higher than the number in 1998, and it accounts for 43% of China’s total exports. Thus, foreign-invested firms have boosted China’s exports. Moreover, foreign-invested firms also produced the 21.5% of total industrial output in 2016 and offered 136.1 million employee positions. Undeniably, FDI has a significant positive effect on China’s economy.

Notwithstanding, Zhang (1993) argues that FDI seems to have a spillover effect on China’s economic transition towards a market-oriented system in three ways: diversifying the ownership structure, establishing market-oriented institutions and facilitating reforms of state-owned enterprises. Also, FDI in China has stimulated competition and helped China integrate with the world economy.

Given the effects that foreign investment has on the Chinese economy, it is important for both foreign investors and the Chinese administration to know which factors affect the performance of those companies as well as the specific location(s) that foreign companies would like to invest in. Shen (1998) discusses the case of Zhejiang a coastal province which strangely enough although a coastal area has fallen behind in attracting foreign investment in relation to other sister provinces and cities. Moreover, Shen (1998) states the gap in FDI between different provinces is tomorrow’s gap in economic development. Bearing this in mind, the Chinese administration can take action to improve access for foreign investors and even direct investment to areas which are considered underdeveloped in order to achieve a harmonious growth all over the country. Zhang (2006) in his conclusion states ‘Since poverty in China is concentrated in the rural inland areas, one policy implication of this study is that some preferential measures should be provided by the central government for the inland region to attract more FDI’ (pg 88).

Different Stages Of Entry Timing Research

Literature regarding entry timing includes three developmental stages. In the first stage, scholars aim to explain the reasons for the decision of foreign market entry according to monopolistic or ownership advantages (Hymer, 1976; Knickerbocker, 1973). As different entry modes represent different managerial costs and capacities for competing in the market, Buckley and Casson (1981) present the optimal period for firms regarding switching between entry modes. Based on these two theories, Dunning (1988) proposes a framework that combines "the ownership and internalization advantages of firms, and [the] locational advantages of countries" (Gaba et al., 2002, p.41). Agarwal and Ramaswami (1992) state that this framework can be used for examining the foreign market entry of firms.

In the second stage, as noted by Gaba et al. (2002, p.41, cited in Hill, Hwang & Kim, 1990), recent business strategists and marketing researchers "extend earlier classical works with multivariate frameworks that includes strategic variables (firm and industry) and competitive/environmental variables (country and industry)". Lambkin (1988), Lieberman and Montgomery (1998), and Mitchell (1991) found that entry timing affected firms regarding attaining a competitive position and helped firms to discover how to sustain this position.

Following the above stages, research concerning entry timing is conducted in the third stage. Before the mid-1990s, most studies focused primarily on the relationship between market entry timing and firm performance. These studies were based on domestic markets (Lee, Smith & Grimm, 2000; Li, 1995; Lilien & Yoon, 1990; Mitchell, 1991; Parry & Bass, 1990; Robinson, 1988; Suarez & Lanzolla, 2007; Varadarajan, Yadav & Shankar, 2008; Carpenter & Nakamoto, 1989; Lieberman & Montgomery, 1998). Following the mid-1990s, researchers switched to investigating the foreign market. A large body of literature established during this time, point out that entry timing is a significant factor that can affect the decision for firms to invest in foreign markets.

First-mover And Late-entrants Advantage Theory

The third stage includes many theories about entry timing. The first is the ‘first-mover advantage’ theory. Lieberman and Montgomery (1988, p.41) define first-mover advantages as "the ability of pioneering firms to earn positive economic profits." They contend that first-mover advantages arise from three primary sources: technological leadership, the pre-emption of assets, and the creation of buyer switching costs. Furthermore, as Pan et al. (1999) cited Decastro & Chirsman, (1995) and Mitchell Shaver & Yeung (1994) mention in their studies, first-mover advantages include four perspectives: economic, pre-emptive, technological, and behavioral. Moreover, Luo and Peng (1998) argue that first-mover advantages benefit early entrants in three ways: technological leadership, pre-emption of scarce assets, and the establishment of entry barriers for follower firms. By combining these three explanations, first-mover advantages can benefit foreign firms in three ways. Firstly, first-mover advantages make early entrants spend less on managerial costs and in this way enable firms to pre-empt assets. In the initial period, competition in the foreign market is not as intense as in later periods. Thus, early entrants do not need to exert as much effort on competition, which late entrants are always expected to do to gain access. This means that managerial costs are less for early entrants. Secondly, early entrants can set market standards that favor their profits and can, therefore, make full use of these standards to retain their first-mover advantages. Finally, early entrants have higher customer preference and can use this advantage to establish barriers to late entrants.

First-mover advantage does not, however, guarantee higher performance. Entering a foreign market means the firm will suffer from the liability of foreignness, "i.e., the manifestation of additional costs and risks arising from a lack of complementary

resources useful for understanding and operating in the host environment.” (Stucchi, 2012, p.280). Isobe et al. (2000), Kerin, Varadarajan & Peterson (1992) and Lieberman and Montgomery (1998) state that it is debatable whether earlier entrants will have an overall higher performance than followers. Kerin et al. (1992) and Lilien and Yoon (1990), however, state that there is significant evidence to support that surviving first-movers will hold a higher market share than late entrants. Lambkin (1998) states that early entrants, early followers, and late entrants exhibit significantly different performances. Additionally, as Gaba et al. (2002) note in their study, early entrants tend to show better performance than early followers and late entrants. Thus, earlier entry timing provides an opportunity for attaining a leading position in a foreign market; however, first-mover advantages only are not sufficient for firms to attain and sustain higher performance as first-movers; this is because they face high levels of uncertainty, free-rider effects, and are exposed to additional risks (Lieberman & Montgomery, 1988).

In foreign markets, the risks and uncertainties are much higher than in domestic markets. Zaheer (1995) state that different cultures and institutional settings will also increase uncertainties and risks. In a foreign market, even when one firm enters a sector in the host market early as a foreign firm, local firms may have operated in this sector for years, which will reduce the first-mover advantage. However, the political environment can have a positive effect on early entrants (Frynas, Mellahi & Pigman, 2006). Government always treat early entrants as instrumental for attracting additional foreign investment, which in turn will enhance first-mover advantages (Murray et al., 2012).

Recently, several researchers have conducted research that examines the first-mover advantage. Research conducted by Delios and Makino (2003) show that early entrants put forward larger investments. Magnusson, Westjohn & Boggs (2009) found a critical relationship between early entrants and market performance. These two studies and many others show that early entry timing has a positive effect on market performance. Mitchell (1991) also argues that early entry timing has a positive effect on market performance, but that early entry timing only is not sufficient for a firm to attain a high level of performance (Gaur & Lu, 2007; Golder & Tellis, 1993; Wang, Chen & Xie, 2010). To explain this, Mitchell, Shaver and Yeung (1994, p.56) examined the impact of entry timing on market share performance in a foreign market, and found the relationship between high market share performance and entry timing into a foreign market to be non-monotonic; the researchers conclude, “foreign entrants survive longer in product markets with a moderate number of foreign players”. Thus, examining the impact of entry timing and market performance using both market share performance is necessary.

Contrastingly, late entrants also have late-mover advantages. As Schnaars (1994) argues, first-movers have disadvantages that, in turn, become advantages that late entrants enjoy. Late entrants can benefit in three ways: (1) they have the opportunity to free-ride on first-mover investments; (2) they can use the experience of first-movers to solve technological problems and market uncertainties; (3) it is difficult for first-movers to change their structure or products in order to adapt to the new environment during the late period. "Late movers may be able to free ride on a first mover's investments in some areas such as R&D, customer education, and infrastructure development" (Frynas et al., 2006, p.340). First-movers face high levels of operational risk and market uncertainties. Once late entrants enter the market, they can use the solutions to these risks and uncertainties, thus enjoying free- riding on first-mover investments. Finally, in the initial period, the organizational structure and products of first-movers may be restricted to a fixed type. Late entrants can, therefore, use new structures and products to compete with early entrants in foreign markets. First-mover advantages can in this way be largely counteracted.

Investment Size And Entry Mode (strategic choice)

Despite the factors listed above, strategic choice is also an important factor when analyzing the impact of entry timing and market performance. Strategic choice is different from entry timing and is primarily concerned with what strategy a firm should adopt, for example, how much the firm will invest initially, or which entry mode should be used. Gaba et al. (2012) state that entry-timing performance relationships may be contingent on other factors such as investment size, entry mode, firm location and advertising intensity (Cui & Lui, 2005; De Castro & Chrisman, 1995; Kerin et al., 1992; Szymanski, Troy & Bharadwaj, 1995). Hitter and Tyler (1991) point out that how a firm enters into, and how it performs in a foreign market, are not only determined by the industrial environment but also affected by the firm's strategic choices. More specifically, whether a firm can attain and maintain a leading position is significantly related to whether the firm's strategic choices match changing industrial environment conditions (Reger, Duhaime & Stimpert, 1992). Furthermore, a firm’s market performance is also affected by how it is constructed and how it allocates its investments (Child, Chung & Davis., 2003). Child (1972, p.10) also argues that it is imperative to "recognize the exercise of choice by organizational decision makers. The boundaries between an organization and its environment are defined [to a] large degree by the [types] of relationships [that] its decision makers choose to enter [into]".

Cui and Lui (2005) and Pan et al. (1999) note that entry mode and investment size are potentially the most fundamental of strategic factors. Each entry mode and strategy has its benefits and risks, and as such, strategic choice plays a significant role in the decision-making of entering into a foreign market (Brouthers & Brouthers, 2000; Dikova & Van Witteloostuijn, 2007; Woodcock et al., 1994).

The impact of entry mode on a firm's performance can, however, be inconsistent (Gaur & Lu, 2007). Chowdhury (1992) and Delios and Beamish (2004), however, note that regarding a firm's market share performance, different entry modes do not have different impacts. Gaur and Lu (2007) note that this conflict occurs for two reasons. Firstly, the difference between the host and home market varies from one firm to another. As such, wholly-owned subsidiaries are the reason why some firms succeed in foreign markets but may be the reason why other firms fail in the same context. Secondly, firms always learn how to perform well in the local market and become adept to the environment of the said foreign market. Thus, the level of ownership has less influence than is assumed.

Investment size can also affect the ability of a firm to make full use of first-mover advantages or the reduced risks of late followers. Investment size should, therefore, be a critical indicator of a firm's strategic choices. (Murray et al., 2012)

Advertising Intensity

A significant body of literature has investigated the relationship between advertising expenditures and firms' financial metrics. Financial metrics include profits, market capitalization or value, and market-to-book ratio. The relationship between advertising expenditures and market performance has been proven positive in studies conducted by Binswanger, Ruttan and Ben-Zion (1978) and Conchar Crask & Zinkhan. (2005).

Cui and Lui (2005) point out that in many emerging markets, the amount of advertising expenditure has a significant effect on the organization's market share and profitability. Firstly, early entry firms that undertake intense advertising assist in increasing consumer awareness, and enhance the possibility of superior performance (Szymanski et al., 1995). Japanese firms begin advertising their products in China during the early stage of entry, as they believe that raising awareness about their products and brands will deliver significant sales.

Hirschey and Weygandt (1985) also posit a link between advertising and a firm’s market performance, concluding that advertising systematically and positively influences the market performance of a firm. Chauvin and Hirschey (1993, p.129) state that "advertising constitutes a key determinant of the market value of the firm." O'Brien (2003) reports a significant positive relationship between advertising intensity and market-to-book ratio.

Furthermore, West et al. (2008) note that creativity in advertising is highly prized for its ability to gain consumer attention and bestow value to brands. These benefits induced by advertising, in turn, boost the sales and profits of firms (Kirmani & Wright 1989; Leone, 1995; Mela, Gupta & Lehmann, 1997; Osinga, Lefflang & Wieringa, 2010). In addition, Chemmanur and Yan (2009, p.41) state that “advertising can signal quality not only to the product market, thereby allowing consumers to price the firm’s products correctly in equilibrium, but also to stock market investors on the true value of a firm’s projects, thus allowing them to price the firm’s equity correctly in equilibrium”. Moreover, Chauvin and Hirschey (1993) point out that advertising expenditure can be treated as an investment in a firm’s intangible assets, and that this investment has a predictably positive effect on the firm’s performance.

William and Thomas (1967) also found a significant statistic and quantitative impact of advertising on profit rates. Chauvin and Hirschey (1993) highlight a similar result, stating that advertising has a significant, positive, and consistent influence on the market value of a firm. In research conducted by Graham and Frankenberger (2000), it is shown that changes in advertising expenditure are highly associated with earnings. Srinivasan et al. (2008, p.14) states, “marketing activity such as advertising enables the company to charge high prices, attain greater market share, and sales (Boulding, Eunkyu & Staelin 1994), command consumer loyalty (Russell & Kamakura, 1994), and hence, ward off competitive initiatives”.

However, some empirical studies have challenged the relationship between advertising and a firm’s performance. Han and Manry (2004) studied the relationship between advertising expenditures and stock price using a sample of Korean firms. They found that advertising expenditures were negatively related to stock price. Additionally, Tai and Chan (2001) employed a portfolio approach in their investigation to examine the relationship between advertising expenditure and stock return. In their study, advertising expenditure was scaled by sales and the market value of equity, and amortized over five years. They conclude that advertising expenditure is not directly related to stock returns. Core, Guay and Van Buskirk (2003) also state that the relationship between advertising and a firm's performance is not significant. Furthermore, Connolly, Hirsch and Hirschey (1986) investigated whether advertising expenditure can be used as a measure of market value, and found that advertising expenditure is insignificantly and negatively related to market value.

Moreover, advertising intensity is always associated with other factors like entry mode and investment size. As Anand and Delios (2002) illustrate, a firm will more likely choose wholly owned subsidiaries with a high level of advertising intensity than other entry modes. Similarly, Chauvin and Hirschey (1993, p.137) state that the impact of advertising expenditure differs according to firm size and that "size advantage[s] are relevant in determining the valuation effects of advertising." Furthermore, Connolly and Hirschey (2005) found firm size was related to advertising intensity; the impact of advertising expenditure was more significant for large firms than small firms. Gomes-Casseres (1989) states that advertising intensity is associated with a preference for wholly owned subsidiaries and equity joint ventures. Tsang (2005) also found that a percentage of foreign equity is positively related to advertising intensity. Additionally, Gatigon and Andson (1988) indicate that a firm with a high level of percentage of equity tends to have a high level of advertising intensity. Thus, advertising intensity has a joint effect alongside entry mode and investment size.

Firm Location

Firm location, on the other hand, is another important factor influencing the market performance of a firm. There are three major regions in China. The first region is Eastern China, the second region is Northeastern, and Middle China and Western China is the third one. According to the Chinese Statistic Yearbook, Eastern China comprises only 36.5% of the population of the entire country, but contributes 55.3% of GDP, and has 87.3% of FDI. Thus, there is a significant imbalance among the four different regions. Therefore, when multinationals choose to invest in China, which specific region to invest in will be a crucial decision to consider. Hu and Chen (1996) state that in China, the location of a joint venture is significantly related to its performance. Sridhar and Wan (2009) state that the choice of firm location affects investment, employment, and output.

Moreover, firm location is also related to entry mode. In Eastern China, foreign firms will more likely get what they want, compared to other parts of China (Pan, 1996). Additionally, a more developed area infers a lower level of risk, which in turn will encourage multinationals to choose wholly owned subsidiaries (Pan, 1996). Coughlin and Segev (2000) also found that coastal locations are a positive determinant for FDI location. Zhang (2006) concurs that FDI inflows are larger in the coastal region than in the inland regions.

Firm location is also related to entry timing. In 1984, China first declared five special economic zones (SEZ) and 14 open coastal cities. “In this region, a variety of measures are available to assist foreign investors and SEZs in particular, and [for enjoying] maximum freedom from the central government to experiment with market economies” (Chadee & Qiu, 2001, p.126). Thus, even when a firm is among the first-movers in other regions of China, compared to firms investing in SEZs and the 14 open coastal cities; it may not be able to enjoy the first-mover advantages. However, since the Chinese Government is working on narrowing the gap between different regions, cities other than the SEZs and the 14 open coastal cities have created more incentives to attract FDI (Wei, 2009). Therefore, even though a firm investing in other regions may be treated as a late-mover, it can still enjoy a more beneficial investment environment (Wei, 2009). There is a lot of discussion about SEZs, their effectiveness and a number of legal issues have arisen (Peng & Fei, 2017) however their benefits are undeniable.

Differences Among Industries

Strategic choice and market performance are determined primarily by the industry (Mauri and Michaels, 1998). In a given industry, as the basic structural elements of industry are stable, its members can share competitive characteristics. In other words, successful firms can develop resources for producing competitive advantages, and other firms can imitate these resources to reduce the competitive gap. For example, in the technology industry, direct competitors can share the same opportunities for innovations (Klevorick, Levin, Nelson & Winter, 1995; Cohen and Klepper, 1992), and firms can use the same protection mechanism/s to protect their investment (Levin & Gaeth, 1988).

From a marketing expenditure perspective, different industries have their product differentiability, buyer characteristics, and product life-cycle or close rivalry (Comanor & Wilson, 1974; Kotler, 1994). Thus, the effect of marketing expenditure varies among industries.

Ho Keh & Ong (2005) hypothesize that advertising has a greater market performance impact for non-manufacturing firms than manufacturing firms. They used data covering more than 40 years and 15039 firm-years to test this hypothesis, and show their hypothesis to be supported by their subsequent results. Yasuda (2005) shows that for Japanese manufacturing firms, advertising has a significantly positive impact on firm performance.

Firm location and Industry difference

There is a tendency for specific industries to choose specific areas. The ideal regions for manufacturing firms are Middle and Northeast China, while non-manufacturing firms tend to choose Eastern China. Multinationals will consider where and how to invest in China, based on their particular industry. The Chinese government chose to help develop Eastern China firstly. Thus, the market in Eastern China is the most developed one among all regions in China (Wei, 2009). As a result, the Eastern China has become the richest region in China. Non-manufacturing industries, such as service firms, can enjoy a developed market. The cost of the labor force and price of raw materials is the main obstacle for the development of manufacturing firms (Wei, Luo & Zhou, 2010). Middle and northeast China, on the other hand, is less developed than Eastern China, but the labor and raw materials are much cheaper than Eastern China. Moreover, since the implementation of the Central Development Strategy in 2000, Middle and northeast offer a market with a low-cost labour force, cheap and rich raw materials, rapidly developing infrastructure and attractive investment policy. (Wei et al., 2010). Thus, Middle and northeast China has become an ideal region for manufacturing firms.

HYPOTHESES PRESENTATION, DEVELOPMENT, AND DISCUSSION

In this section, we present the hypotheses and explain how they were developed. The hypotheses are divided into six groups.

The first group concerns the impact of entry timing and entry mode on market performance.

H1: early entrants to a foreign market have higher market shares than late entrants.

H2: wholly owned subsidiaries have higher market shares than contractual joint ventures and equity joint ventures.

H3: entry mode has a positive moderating effect on the entry timing-market share relationship, with early entrants as wholly owned subsidiaries having the highest market shares, followed by equity joint ventures, then contractual joint ventures.

The second group concerns the impact of investment size on market performance.

H4: foreign firms with a large investment size have higher market shares.

H5: investment size has a positive moderating effect on the entry timing-market share relationship.

The third group concerns advertising intensity.

H6: a higher level of advertising intensity will result in better market performance.

H7: advertising intensity has a positive moderating effect on the entry timing-market share relationship.

H8: the interactive effect of advertising intensity and investment size has a positive effect on market share performance.

H9: the interactive effect of advertising intensity and entry mode has a positive effect on market share performance – firms with a high level of advertising intensity and wholly owned subsidiaries having the highest market share, followed by equity joint ventures and contractual joint ventures.

The fourth group concerns firm location.

H10: early entrants in Eastern China have the best market performance.

H11: multinationals which invest in Eastern China with wholly owned subsidiaries achieve the best market performance.

The fifth group concerns advertising and industry differences.

H12: advertising intensity has a significantly positive effect for both manufacturing and non-manufacturing firms. Additionally, the impact is larger for early entrants than late entrants for both manufacturing and non-manufacturing firms.

The sixth group concerns firm location and different industry.

H13: non-manufacturing firms achieve better market performance in Eastern China than in other regions, while manufacturing firms achieve better market performance in Middle and Northeast China than in other regions.

Hypothesis 1 is concerned with the (dis)advantages of early/late entry. As discussed in the literature review, first-movers have a competitive advantage over late entrants. First-movers can pre-empt natural and human resources more rapidly, compared to late entrants (Lieberman & Montgomery, 1988). Lilien and Yoon (1990, p.569) also support this opinion and state, "early entrants have more options on selecting geographic locations, suppliers, and business partners." Furthermore, Delios and Makino (2003) point out that early entrants have enough time and the required capacity to create obstacles for preventing late entrants from entering the host market.

From an informational point of view, early entrants also have advantages over late entrants. Host market conditions and local market knowledge are two critical aspects that foreign firms entering into a foreign market need to solve (Zaheer, 1995; Dikova & Van Witteloostuijn, 2007). This is because an early entrant firm has more time than a late entrant to become familiar with the host market’s conditions, and to acquire local market knowledge (Li, 1995; Pan et al., 1999). Moreover, as discussed previously, Carpenter and Nakamoto (1989) state that customers have a stronger preference for early market entrants. Early entrants, therefore, have a stronger selling advantage, compared to late entrants.

We discussed in the literature review that first-mover advantages come with substantial costs and uncertainties. At the start of entering a foreign market, uncertainties are much more important than in any other stage of entering such a market (Luo, 1998). Cantwell Glac & Harding (2004) and Nerkar and Roberts (2004) state that it is important for foreign firms to learn local market knowledge and use it in conjunction with their resources to develop competitive advantages. However, as Chang (1995) states, local market information is not always easily accessible by foreign firms entering a foreign market; furthermore, whether firms are familiar with the host market’s structure determines the success of knowledge acquisition. Late entrants, however, can access this information from early entrants, thus protecting them from such uncertainties (Delios & Makino, 2003; Gao, Pan, Lu & Tao, 2008).

Developing and developed countries present different institutional uncertainties. Dikova and Van Witteloostuijn (2007) argue that local market institutions serve as a critical force affecting the performance of foreign firms. The market system in developing countries is different from the thorough market economy system in developed countries. In developing countries, the process of substituting old market regimes with market economy mechanisms remains ongoing; this forces firms to undergo “far-reaching institutional reforms” (Dikova & Van Witteloostuijn, 2007; Pan et al., 1999). As such, many firms prefer to wait and see how the first-movers cope, rather than being a first-mover themselves. As a result, late entrants may face less institutional uncertainties and risks than first-movers. Based on these two approaches, we formulated the first hypothesis (H1).

Hypothesis 2 concerns entry mode. According to the Rules for The Implementation of The Law of The People’s Republic of China on Foreign-Capital Enterprises (1990), the entry mode a multinational can use to enter China is not restricted to any particular mode. However, Catalogue for Guidance of Foreign Investment (2017) has prescribed that several industries are not open for foreign firms and several industries are open for foreign firms with specific entry mode. Among all industries open to foreign firms, there are mainly three types of entry modes: equity joint ventures, contractual joint ventures, and wholly owned subsidiaries. While equity joint ventures and wholly owned subsidiaries are equity entry modes, contractual joint ventures are classified according to the non-equity entry mode, where local companies and foreign firms effect contractual partnerships (Tallman & Shenkar, 1994). Hahn and Shaver (2005) point out that firms that wish to enter a foreign market using wholly owned subsidiaries will rely significantly on their resources in the home market; furthermore, with a high level of ownership of local firms, foreign firms entering a foreign market can easily copy what they have successfully achieved in their home market to the host market. Papyrina (2007), as cited in Murray et al. (2012, p.50), state that wholly owned subsidiary firms “incur lower new resource-based costs." Furthermore, a higher level of ownership supports a firm to perform better in foreign markets (Gaur & Lu, 2007). Compared to joint ventures, the operational costs associated with wholly owned subsidiaries are also likely to be less substantial, because foreign investors can avoid problems arising from divergent strategic viewpoints, dissimilar management philosophies, incompatible administrative routines, and different corporate and national cultures. Moreover, wholly owned subsidiaries ensure that foreign firms completely control foreign investments. As control power and direct management have been shown as increasingly important in the market operations of firms, wholly-owned subsidiaries are more powerful than other types of entry modes regarding market competition, and they will seize bigger market shares (Murray et al., 2012). Fung et al (2004) discuss the case of Whirlpool which formed a joint venture with Beijing Snowflake Electric Appliance Group only to end the joint venture 2 years after it lost USD 30milion (pg 14).

As previously discussed, only early entrants have an opportunity to attain a leading position, and they should, therefore, attain more local knowledge to sustain this position (Kerin et al., 1992). To reiterate, joint ventures are non-equity mode ventures, where local companies and foreign firms make contractual partnerships (Tallman & Shenkar, 1994). Thus, contractual joint ventures make it more difficult for foreign firms to compete in a foreign market (Murray et al., 2012). Cui and Lui (2005) and Papyrina (2007) argue that in contrast to contractual joint ventures, wholly owned subsidiaries offer foreign firms a high level of managerial control, minimal conflicts of interests and [the] avoidance of partner opportunism. Thus, hypothesis H3 arises.

On the other hand, investment size also has a significant effect on firms’ performance in a foreign market. As previously noted, foreign firms need to acquire local market knowledge to overcome the liability of foreignness and [to] compete with local firms (Dikova & Van Witteloostuijn, 2007; Zaheer, 1995). Cui and Lui (2005) and Isobe et al. (2000) suggest that foreign firms need their resources to use first-mover advantages. Furthermore, larger investments indicate larger firm size and capacity regarding market competition. Magnusson et al. (2009) argue that firms with a large investment size are more likely to succeed regarding dealing with high risk and uncertainties. Thus, hypothesis 4 arises.

Endogeneity is an issue that should be taken into account when examining the relationship between the factors previously discussed. Papyrina (2007) and Shaver (1998) argue that foreign market entry factors affect this process jointly; therefore, it is necessary to test for endogeneity. In this study, endogeneity is examined using the interactive effect between entry timing, entry mode, investment size, and advertising intensity on a firm’s market share performance. Papyrina (2007) also points out that entry timing and entry mode have a joint effect on a firm’s market share performance. Furthermore, early entry alone is not sufficient for a firm to achieve a leading position in a foreign market; additionally, investment size also affects entry mode (Cui & Lui, 2005; Isobe et al., 2000; Luo, 1998). Thus, in this study, the interactive effects between entry timing, entry mode, and investment size are examined.

Hypothesis 5 applies to another interactive effect between entry timing and investment size. Investment size will likely have a positive effect on a firm’s market share performance. With large investment size, firms can attain local market knowledge and use local resources more easily (Liberman & Montgomery, 1998). Therefore, early entrants with large investment sizes can attain more first-mover advantages than early entrants with smaller investments.

Advertising intensity is also an important factor that needs to be considered. In a market-oriented economy, the amount of advertising expenditure will have a significant effect on the firm’s market share and profitability (Cui & Lui, 2005). Early entry timing, coupled with a high level of advertising intensity will give early entrants an opportunity to achieve high market performance (Szymanski et al., 1995). For late entrants, a good and effective advertising strategy will help them overcome late-entry disadvantages, and assist them in achieving good market performance (Lieberman & Montgomery, 1998). Thus, H6 and H7 arise.

Advertising intensity will not only affect market performance alone but will also effect interactive effects on investment size. Advertising expenditure can be treated as an investment. Connolly and Hirschey (2005) conclude the effect of advertising intensity on a firm’s market share performance to be positively related to firm size. Keith and Mark (1993) also state firm size as being relevant for determining the effect of advertising on market performance. Thus, H8 arises. On the other hand, advertising intensity also has an interactive effect on entry mode. Regardless of the type of entry mode a firm chooses into a foreign market, advertising intensity is a strategic choice that a firm makes to boost its performance. However, in an emerging market, where the legal infrastructure is less developed, foreign firms with equity joint ventures will face the risk that their local partners will “[act] opportunistically” (Tsang, 2005, p.158), and this behavior will dilute the benefits brought on by advertising. However, wholly owned subsidiaries can use the benefit brought on by a high level of advertising intensity to their advantage. Thus, H9 arises.

As the firm location is a crucial factor when considering investing abroad, the interactive effect between firm location and entry mode, and firm location and entry timing should be included in the research. Coastal cities and SEZs are a prime location for FDI, as they have "well-developed infrastructure, [a] large population base, well-established financial and industrial sectors and are well equipped to handle business dealings with foreign firms" (Chadee & Qiu, 2001, p.126) Thus, in a good investment environment, early entrants can make full use of their first-mover advantages to achieve better market performance. Thus, H10 arises. Based on research conducted by Chadee and Qiu (2001), multinationals prefer a higher level of ownership, such as wholly owned subsidiaries, or more than a 50% share of equity, in Eastern China. Thus, H11 arises.

Orr (1974) states that advertising can create a barrier for late entrants in the manufacturing industry and as such, the profit of early entrants will be higher than for late entrants. Similarly, Balaji (2009) also concludes that early entrants have an opportunity for achieving a positional advantage and market share dominance. Ho et al. (2005) conclude in their study that the impact of advertising on a firm’s value is larger for non-manufacturing firms than manufacturing firms. Additionally, the impact of advertising expenditure on a firm’s performance is proven to be significantly positive for early entrants, compared to late entrants (Balaji, 2009). Thus, H12 arises.

Wei Yao and Liu (2009) state that manufacturing industries are moving from Eastern China to Middle and Northeast China, and that the profits of manufacturing firms in Middle and Northeast China are higher than in Eastern China. Furthermore, Middle and Northeast China are becoming centers of manufacturing industries. In contrast, non-manufacturing firms still achieve higher market performance in Eastern China (Wei et al., 2009; Wei, 2009). Thus, H13 arises.

METHODOLOGY AND DATA

Data selection

The dataset used in this study represents the Chinese industrial census ranging from 1998 to 2013, and is conducted by the State Statistical Bureau of China. As the State Statistical Bureau of China has not released new data from 2014 till now, the time period of data used in this study is restricted to 2013. The dataset includes all manufacturing and non manufacturing firms. The dataset contains geographic location, industry code, firm type, age, number of employees, and accounting information. The limitations of this dataset are discussed in the introduction. Table 2 presents the correlation matrix. Furthermore, the database included in this study covers a longer period compared to that in Murray et al. (2012).

Dependent variables

Market share: market share is captured by the percentage of a foreign firm’s sales to total sales in China within the same product sector. A firm’s market share varies from one year to the next and as such, it is not possible to use a specific year to represent the firm’s market performance. Thus, to compare the overall difference in market performance of early entrants and late entrants, respectively, we used the average market share. The average market share was computed as the average market share of a firm during the entire period. “If a firm exited during the period, we measured the average market share for years of operation” (Murray et al., 2012, p.57).

Independent variables

Entry timing: entry timing is measured as the timing of a firm when it first enters the Chinese market. An early entrant is captured by a dummy variable, which takes the value of 1 if the firm is a first-mover and 0 if otherwise. Moreover, lag time measures followers’ delay in years after early entrants making the first move (Murray et al., 2012).

Entry mode: there are mainly three types of entry mode: contractual joint ventures, equity joint ventures, and wholly owned subsidiaries. In this study, there are two dummy variables (equity joint ventures and wholly owned subsidiaries). We used contractual joint ventures as the baseline in the analysis.

Investment size: investment size is measured as the initial investment when the firm first entered the Chinese market.

Advertising intensity: advertising intensity is measured as market expenditures as a percentage of total sales.

Firm location: there are three primary regions in China. The first region is Eastern China (Location 1), the second one is Western China (Location 2), and the third one is Middle and Northeast China (Location 3). In this research, there were two dummy variables (Location 1, Location 3). Location 2 (Western China) is used as a baseline in the analysis.

Control variables

Murray et al. (2012) employed three control variables: industry concentration, industry growth, and firm location. Industry concentration was not available in all the databases we had access to. Firm location was therefore used as an independent variable in this study. Thus, in this study, there is only one control variable: industry growth. Industry growth was obtained from the China Statistical Yearbook.

Models

Multiple linear regression was employed to examine market share performance. The method of variance inflation factor (VIF) was used to identify the presence of multicollinearity. The VIF was lower than 10; thus, multicollinearity was not a serious problem in the regression. Based on Murray et al. (2012), there are three models in this study. Model 1 examines the impact of early entrants according to entry mode and investment size on market share performance. Model 2 uses lag time as opposed to early entrants to examine the delayed effects on market share performance. Model 3 uses all independent variables as indicators.

RESULTS

Tables 3, 4 and 5 show the estimated influence of entry timing, entry mode, investment size, firm location, advertising intensity and interactive effects on a firm’s market share performance for all industries, manufacturing industries, and non-manufacturing industries, respectively. The coefficients in Table 3 show the influence of each factor on the firm’s market share performance, Tables 4 and 5 show the influence of each factor on the firm’s market share performance, based on the specific industry. More specifically, the positive coefficient means that the factor has a positive effect on the firm’s market share performance.

Hypothesis 1 states that early entrants into a foreign market will have a higher market share performance. The findings in Table 3 show that the coefficient of early entrants is positive, which means it is positively related to market share performance. In model 2 (M2), lag time has a negative coefficient of market share performance Therefore, late entrants have a lower market share performance. This result supports H1. Furthermore, Table 6 presents the average market share of foreign firms. Early entrants have an average market share of 2.1%, while late entrants have a market share of 0.5%. These figures also support the hypothesis that early entrants perform better than late entrants.

Hypothesis 2 states that wholly owned subsidiaries have higher market share performance than equity joint ventures, followed by contractual joint ventures. Findings in Table 3 show that wholly owned subsidiaries performed better than contractual joint ventures. However, the coefficients of equity joint ventures are insignificant; thus, equity joint ventures are not significantly different from contractual joint ventures. Therefore, H2 is only partially supported.An explanation for the insignificance is that both equity joint ventures and contractual joint ventures are forms of cooperation between a foreign and a local firm. Cui and Lui (2005) state that joint ventures suffer from high cooperation cost and a low level of managerial control. Thus, the difference between two joint ventures is not significant.

Hypothesis 3 states that entry mode has a positive moderating effect on entry timing–market share relationship, as wholly owned subsidiaries, have the highest market shares. The results of model 3 (M3) show that the coefficient capturing the interaction of entry timing and wholly owned subsidiaries is positive and significant, and the coefficient capturing the interaction of entry timing and equity joint ventures are negative and insignificant. These results mean that early entrants in the wholly owned subsidiaries mode achieve a better market share performance than early entrants adopting the contractual joint ventures mode. However, early entrants employing the equity joint ventures mode are not significantly different from those employing contractual joint ventures. Thus, H3 is partially supported.

Hypothesis 4 states that foreign firms with larger investment sizes have higher market share performance than firms with a smaller investment size. Results in Table 3 (M3) show that the coefficients of investment size for both these models on market share performance are positive. This means that foreign firms with large investment size enjoy higher market share performance. Thus, H4 is supported.

Hypothesis 5 states that investment size has a moderating effect on entry timing-market share performance. The coefficient in M3 capturing the interaction of investment size and entry timing on market share performance is positive, meaning that early entrants with larger investment size will have better market share performance.

Based on the regression results, advertising intensity is positively related to a firm’s performance. This means that a firm that adopts an effective advertising strategy will attain a higher level of market performance than those who do not. Thus, H6 is supported. However, advertising intensity can be both positive to early and late entrants, which means that even though advertising can boost the market performance of early entrants, late entrants can also adopt an intensive advertising strategy to achieve good market performance. Therefore, H7 is not supported, as advertising intensity has a positive effect on market share performance for both early and late stage market entry.

Hypothesis 8 states that the interactive effect of advertising intensity and investment size will positively affect a firm's market performance. The results in Table 3 show that the coefficient of the interactive effect is positive and significant. Thus, H8 is supported. However, based on the results, the coefficient of the interactive effect of entry model is significant. Additionally, the coefficient of the joint effect of advertising intensity and wholly owned subsidiaries is larger than the coefficient of the joint effect of advertising intensity and equity joint ventures. This means that wholly owned subsidiaries with a high level of advertising intensity will have the best market share performance, followed by equity joint ventures, then contractual joint ventures. Thus, H9 is supported.

As shown in Table 3, the interactive effect between early entrant and Location 1 (Eastern China) yields the highest significantly positive coefficient. Thus, H10 is supported.

The interactive variables of Location1 and entry mode, Location 3 and entry mode indicate the combination effect of firm location and entry mode. The coefficient of Location 1 (Eastern China) and wholly-owned subsidiaries is the highest. Thus, H11 is supported.

As shown in Tables 4 and 5, the coefficient of advertising intensity is significantly positive for both manufacturing and non-manufacturing firms. However, the coefficient of non-manufacturing firms is higher. Additionally, the interactive effect between advertising intensity and entry-timing is also indicated in Tables 4 and 5. Regardless of manufacturing or non-manufacturing firms, the interactive effect of early entrants and advertising intensity is significantly positive, while the interactive effect of the late entrant and advertising intensity is also significant with a lower value. Thus, H12 is supported.

As shown in Tables 4 and 5, the coefficient of Location 1 (Eastern China) is higher than Location 3 (Middle and northeast China) for non-manufacturing firms. Moreover, the coefficient of Location 3 (Middle and northeast China) is higher than for Location 1 (Eastern China) in the case of manufacturing firms. Thus, H13 is supported.

DISCUSSION

In this study, we examine the effect of entry timing, entry mode, investment size, firm location, advertising intensity, and their joint effect on the market share performance of foreign firms. First, we examine the impact of entry timing on market share performance. The results suggest that early entrants have higher market share performance. This finding is consistent with the first-mover advantages that are discussed in the literature review section, where early entrants are shown to have first-mover advantages. On the other hand, the most important issue this study deals with is the strategies that foreign firms can use to maximize their profit. “The key to the first-mover advantage–early-entrant survival disadvantage dilemma lies in certain strategic choices that can help early market entrants maintain higher market shares” (Murray et al., 2012, p.61). In this study, we use entry mode, investment size, firm location, and advertising intensity as determining factors for dealing with market share performance. Based on our results, the term of early entrants with wholly owned subsidiaries is positively related to market share performance. Thus, early entrants with wholly-owned subsidiaries have a higher market share performance than equity joint ventures and contractual joint ventures. On the other hand, investment size is another critical factor that affects the firm's market share performance. Based on the results of this study, the interactive effect between investment size and entry timing has a significant positive effect on a firm's market share performance. Therefore, it is suggested that early entrants with large investment size can make full use of first-mover advantages, and thereby perform better in a foreign market. In other words, if a firm has the willingness to spend a larger initial investment in a foreign market, it will achieve a higher level of market performance.

Another strategy a firm can adopt in a foreign market is advertising. Advertising has proven that it can positively affect a firm's market performance. In this study, there is a significantly positive relation between advertising intensity and market share performance. Thus, it is suggested that early entrants should adopt a high-intensity advertising strategy. However, the interactive effect between advertising intensity and both early and late entrants are both significantly positive. This means that regardless of whether a firm is an early or a late entrant, advertising can boost its market share performance. Moreover, as advertising intensity is positively related to market share performance, regardless of the adopted entry mode of the firm, wholly owned subsidiaries will benefit more from a high level of advertising intensity than joint ventures. It is therefore suggested that a firm invests more in advertising, particularly wholly owned subsidiaries. Moreover, advertising intensity has a more positive effect for non-manufacturing firms.

Firm location is also considered in the study. As Eastern China has been the first region that opened its doors to foreign investment since 1976, early entrants into Eastern China perform better than in other regions. Additionally, wholly-owned subsidiaries are identified as the best entry mode a firm should adopt for investing in Eastern China.

CONCLUSION

In conclusion, this study attempts to answer three questions: i) what are the effects of entry timing, entry mode, investment size, firm location, and advertising intensity on market share performance, and what are the joint effects of these factors? ii) Are the effects of these factors the same for all industries? iii) What strategy should multinationals adopt to perform better, and what should government contribute to making the economy perform better?

Firstly, entry timing is a significant factor that a firm should consider when thinking about expanding into a foreign market. However, the performance of a firm in a foreign market is not only determined by entry timing. In this study, entry mode, investment size, firm location, and advertising intensity were tested, with results showing that these four factors are also positively related to market share performance. Joint effects between entry timing, entry mode, investment size, firm location, and advertising intensity were shown to exist. The interactive effect of entry mode and entry timing suggest that early entrants adopting the wholly owned subsidiary model are likely to achieve the highest market share. A large initial investment in the early stage of foreign market entry was shown to have a positive effect on a firm's market share performance. Firm location, alongside entry timing and entry mode, appears to suggest that multinationals consider not only when and how to invest in China, but also where to invest.

Secondly, this study suggests that managers require an in-depth understanding of the effects of entry timing, as well as other factors. A firm needs to consider all factors together to achieve better market share performance. The government should establish a good understanding of regional differences for different industries and should introduce new policies for foreign investors, based on the specific region they wish to invest in.

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TABLE 1

|  |
| --- |
| The effect of FDI on the Chinese economy |
|  | 1998 | 2008 | 2016 |
| Exports by foreign invested firms (billions of US dollars) | 88.6 | 790.5 | 916.8 |
| Share of exports of foreign invested firms in total exports | 44.1 | 55.27 | 43 |
| Share of industrial output by foreign invested firms in total industrial output (%) | 14.9 | 29.5 | 21.5 |
| Number of employees in foreign invested firms (million persons) | 18.0 | 94.3 | 136.1 |

TABLE 2

Correlations table, \* means significant

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 　 | Early entrants | lag time | Equity joint ventures | Wholly owned subsidiaries | Investment size | Advertising intensity | Industry growth | Firm location | Market share |
| Early Entrants | 1 |  |  |  |  |  |  |  |  |
| Lag time | -0.67\* | 1 |  |  |  |  |  |  |  |
| Equity joint ventures | 0.047\* | -0.13\* | 1 |  |  |  |  |  |  |
| Wholly owned subsidiaries | -0.076\* | 0.11\* | -0.84\* | 1 |  |  |  |  |  |
| Investment size | 0.071\* | -0.14\* | 0.051\* | -0.25\* | 1 |  |  |  |  |
| Advertising intensity | 0.09\* | 0.07\* | 0.26\* | -0.3\*1 | 0.27\* | 1 |  |  |  |
| Industry growth | -0.07\* | 0.24\* | -0.32\* | 0.18\* | -0.14\* | 0.28\* | 1 |  |  |
| Firm location | -0.5\* | 0.05\* | -0.21\* | 0.09\* | -0.07\* | 0.14\* | 0.11\* | 1 |  |
| Market Share | 0.18\* | -0.16\* | 0.02 | 0.13\* | 0.19\* | 0.13\* | -0.06 | 0.02\* | 1 |
| Mean | 0.08 | 9.76 | 0.42 | 0.29 | 10.18 | 0.67 | 0.29 | 0.75 | 0.02 |
| Sd | 0.15 | 3.59 | 0.53 | 0.38 | 1.44 | 0.49 | 0.16 | 0.43 | 0.05 |

TABLE 3

|  |
| --- |
| Dependent Variable: Market Share |
| 　 | Model 1 | Model 2 | Model 3 | VIF |
| Independent Variables |
| Intercept | **-2.385** | **-2.271** | **-2.597** | 　 |
| Early entrants | **1.126** |  | **1.524** | 6.73 |
| Lag time |  | **-0.247** |  | 1.12 |
| Equity joint ventures (EJVs) | 0.86 | 0.82 | 0.67 | 6.48 |
| Wholly owned subsidiaries (WOSs) | **0.193** | **0.281** | **0.243** | 7.52 |
| Investment size | **0.463** | **0.51** | **0.407** | 4.73 |
| Advertising intensity | **0.349** | **0.438** | **0.278** | 1.76 |
| Interactive effects |
| Early entrants\*investment size |  |  | **0.654** | 　 |
| Early entrants\* EJVs |  |  | -0.536 | 　 |
| Early entrants \*WOSs |  |  | **3.187** | 　 |
| Early entrants\*advertising intensity |  |  | **0.13** | 　 |
| Lag time\*advertising intensity |  |  | **0.09** | 　 |
| Advertising intensity\*investment size |  |  | **0.18** | 　 |
| Advertising intensity\*WOSs |  |  | **0.13** | 　 |
| Advertising intensity\*EJVs |  |  | **0.08** | 　 |
| Location 3\*Early Entrants |  |  | **0.637** | 　 |
| Location 1\*Early Entrants |  |  | **1.872** | 　 |
| Location 3\*Lag time |  |  | **-0.362** | 　 |
| Location 1\*Lag time |  |  | **-0.541** | 　 |
| Location 1\*WOSs |  |  | **1.725** | 　 |
| Location 1\*EJVs |  |  | 1.028 | 　 |
| Location 3\*WOSs |  |  | **1.237** | 　 |
| Location 3\*EJVs |  |  | -0.342 | 　 |
| Control Variables |
| Industry growth | **0.017** | **0.017** | **0.025** | 1.43 |
| Model indexes |
| N | 153,415 | 153,347 | 153,347 | 　 |
| R2 | 0.157 | 0.182 | 0.203 | 　 |
| Adjusted R2 | 0.1569 | 0.1817 | 0.2029 | 　 |

TABLE 4

|  |
| --- |
| Dependent Variable: Market Share (Manufacturing Industry) |
| 　 | Model 1 | Model 2 | Model 3 | VIF |
| Independent Variables | 　 |
| Intercept | **-1.896** | **-2.035** | **-2.368** | 　 |
| Early entrants | **1.065** |  | **1.358** | 5.32 |
| Lag time |  | **-0.365** |  | 0.98 |
| Advertising intensity | **0.247** | **0.482** | **0.185** | 1.63 |
| Location 1 |  |  | **0.935** | 　 |
| Location 3 |  |  | **2.037** | 　 |
| Interactive effects |
| Early entrants\*advertising intensity |  |  | **0.38** | 　 |
| Lag time\*advertising intensity |  |  | **0.36** | 　 |
| Control Variables |
| Industry growth | **0.005** | **0.005** | **0.014** | 1.08 |
| Model indexes |
| N | 67,253 | 67,148 | 67,148 | 　 |
| R2　 | 0.133 | 0.138 | 0.142 | 　 |
| Adjusted R2　 | 0.1329 | 0.1379 | 0.1419 | 　 |

**TABLE 5**

|  |
| --- |
| Dependent Variable: Market Share (Nonmanufacturing Industry) |
| 　 | Model 1 | Model 2 | Model 3 | VIF |
| Independent Variables |
| Intercept | **-1.265** | **-1.984** | **-2.153** | 　 |
| Early entrants | **1.428** |  | **1.362** | 4.27 |
| Lag time |  | **-0.297** |  | 1.32 |
| Advertising intensity | **0.573** | **0.492** | **0.201** | 1.07 |
| Location 1 |  |  | **1.863** | 　 |
| Location 3 |  |  | **1.328** | 　 |
| Interactive effects |
| Early entrants\*advertising intensity |  |  | **1.037** | 　 |
| Lag time\*advertising intensity |  |  | **0.802** | 　 |
| Control Variables |
| Industry growth | **0.013** | **0.017** | **0.014** | 1.35 |
| Model indexes |
| N | 86,162 | 86,199 | 86,199 | 　 |
| R2 | 0.140 | 0.143 | 0.167 | 　 |
| Adjusted R2 | 0.1399 | 0.1429 | 0.1669 | 　 |

TABLE 6

|  |
| --- |
| Average market share of foreign companies |
| Entry Timing | Average Market Share |
| Early Entrants | 2.1% |
| Late Entrants | 0.5% |