

# Pace of Expansion and FDI Performance: The Case of Auto FDIs in China

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## Abstract

How fast do firms expand in a foreign market after their initial entry? Is faster better? Under what conditions is it beneficial or detrimental for a firm to move fast in a foreign market? This paper attempted to answer these questions by investigating the relationship between a firm's pace of post-entry foreign expansion and its market share performance in a foreign market. The study is an attempt at filling a gap in the existing international business literature. Numerous researches have studied various point-of-entry decisions such as why (motivations), how (entry modes), where (location choices), and when (entry timing) firms make foreign entries. Studies have also investigated the consequences of internationalization, *i.e.*, the relationship between degree of internationalization and firm performance. However, little is known about what happens after initial entry into a foreign market and before firms reach a certain degree of international diversity. As a step towards understanding the internationalization process, this study explores one important characteristic of post-entry foreign expansion—pace of expansion and its performance implications. Opposing hypotheses are developed from the perspectives of industrial organizational economics, and that of organizational learning, the resource-based view of the firm, and internationalization theory. The post-entry experiences of 214 foreign firms in China's automobile market were examined in our sample. Results from multivariate regression show that greater firm performance is associated with greater expansion frequency and expansion magnitude. Furthermore, we found the inverted U shape relationship between expansion frequency and firm performance. J-shaped relationship between expansion magnitude and firm performance was also identified. We conclude this paper with implications for theory, research and management practice.

## Keywords

Pace of Entry, FDI, Chinese Auto Market, Performance

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## 1. Introduction

Research on foreign direct investment (FDI) was first triggered by the rapid expansion of multinational enterprises (MNEs) after World War II. It received increasing academic attention when US-based MNEs encountered serious foreign competition, especially from Japanese firms, in global markets in the 1970s. Decades of research have focused on either point-of-entry questions like determinants of FDI or end-of-cycle questions of the performance implications of going international. Relatively little is known about what happens in between. How the foreign expansion process actually works remains relatively under-studied. Even in research based on internationalization theory or the Uppsala process model, the focus is usually on entry decisions into different foreign markets rather than the post-entry expansion process in foreign markets.

Research on determinants of FDI and outcomes of internationalization has greatly enhanced our understanding of MNEs. The former has resulted in a rich literature studying MNEs' location choice (where) (e.g. [1] [2]), entry mode decision (how) (e.g. [3]-[7]), and entry timing (when) (e.g. [8] [9]). Research on the outcomes of internationalization, on the other hand, has come to rather conflicting conclusions as to the relationship between degree of internationalization and firm performance (e.g. [10]-[14]). In comparison, the question of how firms actually expand in foreign markets receives limited attention. One reason might be that strategic management research has placed more emphasis on content-based rather than process-based strategic features. Another reason might be the lack of longitudinal data that are needed for studying the foreign expansion process.

A better understanding of the foreign expansion process is nevertheless important for several reasons. First, not only are the beginning and the end status important, how firms evolve also matters. Indeed, this may be a reason why the empirical literature on degree of internationalization and performance has come to contradictory findings. Second, most research has either studied only the first entries into a foreign market or treated all of firms' foreign entries as isolated events; failing to distinguish between a firm's initial entries into a foreign market from its subsequent entries. As a result, they were not able to represent a firm's true strategic posture and progress in a foreign market, because a firm's overall strategy may be represented in a process of expansion. Third, for practicing managers, while answers to why firms internationalize and whether internationalization enhances performance can be interesting, they are more often faced with how to actually carry out foreign expansions successfully. Practitioners will benefit from an understanding of the expansion process in a specific foreign market.

This paper seeks to make a pioneering step in filling a gap in the FDI literature by focusing on the foreign expansion process and its impact on performance. Specifically, we attempt to explore whether and in what ways the pace of post-entry expansion influences a firm's performance in a foreign market. This study can potentially make contributions both to international business and strategic management research. For international business research, this paper examines a time-related process-based attribute of the foreign expansion process and its performance implications, making a step towards understanding the internationalization process. This paper thus goes beyond the questions of why, where, when, and how firms enter a foreign market, to explore how fast firms should grow in a foreign market after their entry. The study also tests the internationalization theory in the context of post-entry foreign expansion.

We explore a time-related attribute of strategy, the importance of which has only just started to receive the attention of the management research community [15]-[19]. Timing in resource commitment and deployment is recently proposed to "foster... differential firm performance" [20]. This study provides an empirical linking of firm level pacing decision to foreign market performance. The results of the investigation will provide support for the theoretical arguments based on the resource- and capability-based view and organizational learning theory.

## 2. Pace of Organizational Action: A Literature Review

Pace has been studied in the literature on organizational change, decision-making, innovation and product development, and high-velocity competition. In the research on organizational change, the punctuated equilibrium model argues that firms alternate between long periods of relative stability with low changes and brief periods of radical and discontinuous changes [21]-[24]. This model implies two different paces of change. One is piecemeal, incremental and frequent, which is the normal pace of change occurring in an organization. The other is dramatic, wholesale, radical, and infrequent, which is the pace of change during a revolutionary discontinuity [22] [25]. In this context, pace seems to incorporate two dimensions. One is the scale, or the magnitude of

change [26]. The other is the frequency of change, or rate of change [26]. The punctuated equilibrium model argues that firms either engage in the “piecemeal-incremental” pace of change process with frequent small gradual changes or in the “quantum” pace with infrequent “large dramatic jumps” [25].

Monge (1990) [26] identified six process characteristics in his effort to provide a framework “for the development of dynamic theories of organizational processes”. These were continuity, magnitude, rate of change, trend, periodicity, and duration. Among them, three were time-related and obviously echoed the concept of pace in the organizational change literature. Rate of change was defined as “how fast the magnitude increases or decreases per unit of time” [26], *i.e.* speed of changes occurring in individual variables pertaining to certain organization processes. Periodicity was defined as “the amount of time that transpires between the regular repeating of the values” [26], which was the rhythmic cycle of change. Duration was the length of time a particular process lasts. Therefore, speed, rhythm, and duration seemed to constitute the major time-related characteristics of organizational processes in Monge’s framework.

In the decision making literature, pace and speed are usually used interchangeably to refer to the time it takes for an organization to make a strategic decision [27]-[30]. This is similar to the literature on innovation, where innovation pace or speed is often defined as the time elapsed between the “initial development” and the “ultimate commercialization” of an innovation [31]. Likewise, in the competitive rivalry literature researchers examine the time it takes for a firm to “implement an action”, to “prepare and announce a response”, or to “implement an announced response” [15]. Obviously, pace is used as a synonym of speed, which is usually defined as the time it takes for a certain strategic action to occur or complete.

Gersick’s (1994) [22] study of strategic changes in a new venture and the Brown and Eisenhardt [32] [33] studies of high-velocity competition, treated pace somewhat differently. Instead of focusing on pace as a property of a certain strategic action, they emphasized the pacing activities, or the mechanisms and patterns of pacing certain processes. Gersick [22] studied the pacing mechanisms that a start-up venture used to manage strategic changes. She identified two different forms of pacing. One is time-based pacing, with changes “initiated at temporal milestones”, used by the management “as an organizing framework for the recurring evaluation, proactive strategizing, and adaptation needed to make the company grow successfully” [22]. The other is event-based pacing, “with actions initiated when the right event occurred”, used by the venture partners to ensure that the venture is fulfilling their investment targets.

Time-based, or temporal pacing, was Gersick’s focus and of particular interest to this study, as it specifically dealt with the role of time in strategic processes. Gersick borrowed the biological concept of entrainment as the “basis of temporal pacing” [22]. Entrainment is the process of synchronization, in which vibration of one object will cause another object to vibrate at the same rate. In the case of the new venture in Gersick’s study, management tried to “establish temporal work rhythm” that was entrained to “consequential time limits and schedules originating in its strategic environment” [22]. In its essence, then, temporal pacing in this context was really “rhythmic patterns within organizations” [22].

Influenced by Gersick’s idea of time-based competition, Brown and Eisenhardt [32] [33] studied companies competing in the high-velocity computer industry. They found that one important strategy of successful firms was to use time-paced rhythmic transitions to manage strategic changes and maintain momentum. They argued that a punctuated equilibrium change model did not fit the reality of high-velocity industries [28] [34], where “short product cycles and rapidly shifting competitive landscapes” demanded that firms change continuously for survival [32]. They found that firms manage the relentless pace of change momentum through rhythmic transitions. Similar to Gersick’s argument for temporal pacing, Brown and Eisenhardt [32] [33] argued that rhythmic transition helped to maintain a proper pace of change because predictable and recurring behaviors helped people to time their work and become “focused, efficient, and even confident about the task at hand” [32]. The rhythmic transition process could also match the change cycles in the environment, thus resulting in better performance.

In a recent study of MNEs’ international expansion, Vermeulen and Barkema (2002) [35] investigated “how different rates and patterns of expansion may result in performance differences between firms”. They suggested that three characteristics of the international expansion process—pace, rhythm, and scope—moderate the relationship between the degree of internationalization and firm performance. Pace was considered the same as speed, and measured by the average number of foreign subsidiaries established per year. **Table 1** summarizes the five different ways of conceptualizing pace.

We argue that Monge (1990) [26] provided a rather comprehensive framework to look at process characteris-

**Table 1.** Concept of pace in prior research.

Streams of Literature	Concept of Pace	Examples of Studies
Organizational change	Magnitude and frequency of change	Gersick, 1991, 1994; Miller & Friesen, 1982; Romanelli & Tushman, 1994; Tushman & Romanelli, 1985
Strategic process	Rate of change, periodicity of progress, and duration	Monge, 1992
Decision making	Speed, <i>i.e.</i> , time it takes to make a decision	Baum & Wally, 2003; Eisenhardt, 1989, 1990; Judge & Miller, 1991; Stalk, 1988
Innovation & product development	Speed, <i>i.e.</i> , time it takes to bring a product to market or for innovation to occur	Bayus, 1997; Brown & Karagozolu, 1993; Carmel, 1995; Kessler & Chakrabarti, 1996; Schoonhoven, <i>et al.</i> , 1990; Smith, 1999; Vesey, 1991; Vinton, 1992; Von Braun, 1990, 1991
Competitive rivalry	Speed, <i>i.e.</i> , time it takes to make moves or counter-moves	Chen & Hambrick, 1995; Smith & Grimm, 1991
International expansion	Speed, <i>i.e.</i> , average number of subsidiaries per year	Vermeulen & Barkema, 2002

tics, and that when examining pace of foreign expansion in a foreign market we should encompass at least two aspects: how frequently a firm makes expansion steps and how big each step is. Therefore, in this paper we examine both magnitude and frequency of a firm's foreign expansion process.

The focus of research attention on pace or speed is usually on its antecedents or determinants, rather than its outcomes [30] [31]. In the organizational change literature, the punctuated equilibrium model is widely accepted. However, few empirical studies exist to support the model [23]. Different paces of organizational change are implied in the conceptualization of the model [22], which attempts to be a theoretical representation of the organizational change processes. One study in the early 1980s, however, did investigate the performance implications of different paces of change. Miller and Friesen (1982) [25] found partial support for the idea that it was more effective for firms to make structural changes “infrequently, but quickly and dramatically” in “quantum” pace, rather than through frequent piecemeal incrementalism [25]. The main argument was that an organization is a harmonious gestalt; therefore, a change in one key structural element should be accompanied by corresponding changes in other related elements. As “gestalts may make change expensive and disruptive, because many variables must change in concert to ensure harmony among structural elements, ...it is best to undertake it only when it is necessary and to perform the change as quickly and decisively as possible” [25].

In the decision-making literature, speed is generally assumed desirable for organizations (e.g. [28] [30]). Eisenhardt (1989) [28] identified two major antecedents of decision speed: the number of alternatives and the presence of experienced counselors. She commented that fast decision making speed was probably associated with better performance in sales growth and profitability. This is especially the case in high-velocity industries, because superior decision speed helped managers to learn fast and to take advantage of market opportunities ahead of their competitors [28]. Judge and Miller (1991) [30] tested the relationship between decision speed and performance using a sample of 32 firms in the biotechnology, textile, and hospital industries. Their analyses did not find a significant relationship between decision-making speed and performance in both sales growth and profitability, except in the biotechnology sub-sample where they found a positive effect. This seemed to support Eisenhardt's observation that in high-velocity environments, fast decision-making is associated with better market and financial performance. Baum and Wally (2003) [27] found that “fast decision making is a predictor of subsequent firm growth” but “does not precede improved profits.

There are contradictory results in the innovation literature, regarding the relationship between innovation or product development speed and organizational performance. Many authors consider faster speed beneficial to firms [36]-[38]. Swift innovation or product development can reduce costs [38], increase revenue [37] [39], gain legitimacy and improve the likelihood of survival for new start-ups [37], and improve profitability [28] [39]. Some researchers, however, have pointed out the downsides or “hidden costs” of speed [40]-[42], such as excessive usage of resources [40], lower quality of the product [43], and so on. After a detailed review of prior research, Kessler and Chakrabarti (1996) [31] argued that faster product development was associated with: lower costs of development in the long term; higher product quality if focused on customers' needs; and ultimately, project success when speed brings competitive advantage in an environment with shortening product cycle and increased rate of change. However, as Brown and Karagozolu (1993:38) [44] pointed out, the research on

product development speed was “mostly based on case studies and anecdotal observations...empirical studies with larger samples rare. Therefore, the relationship between pace and performance of organizational action has not been thoroughly examined in prior research, and no conclusive findings are available. The majority of the studies that tackle the issue, nevertheless, tend to believe that faster speed in carrying out structural changes, in decision making, and in innovation or product development is generally associated with better organizational performance, no matter how the performance is measured. “There seems to be an underlying bias toward speed, meaning faster is always better” [31], especially when the business environment is characterized by fast changes, shortened product life cycles, and increased competition. This is based, however, more on “specious reasoning and hoopla” than on “hard data” [40].

Pace attracts almost no attention in the international business literature. An exception is Vermeulen and Barkema’s (2002) [35] recent paper, in which two temporal variables—pace and rhythm—were modeled as moderating the relationship between multinationality and corporate performance. They found that these two variables negatively moderate the positive impact of international expansion on a firm’s economic performance. **Table 2** summarizes the research on the relationship between pace and performance of organizational actions.

### 3. Theory and Hypotheses Development

There is not enough existing literature that can shed light on whether faster or slower pace of foreign expansion will be more beneficial. We resort to two different theoretical perspectives to derive our hypotheses.

The economics-based positioning perspective of the firm in general points to the advantages of a fast expansion. Industrial organization (IO) economics emphasizes creating barriers to entry as an important strategy to gain superior performance. Barriers to entry can be built through fast expansion for the following reasons. First, fast expansion enables a firm to build up a strong position and capitalize on market opportunities before too many competitors crowd into the market [37]. This is especially meaningful in a market where early-mover advantages exist and market opportunities are taken up quickly [45]. Second, swift expansion can help a firm to secure resources necessary for long-term development in the market. These will include raw materials, prime locations, human resources, distribution channels, good partners, and so on. Much like the advantages for the first movers [46], fast movers in foreign market can preempt valuable resources and deter new entrants. In addition, fast expansion in penetrating a foreign market sends a signal to the existing and potential customers about the firm’s optimism and long-term commitment to the market, which help a firm to achieve legitimacy in the market. Fast action also signals to the potential competitors of the firm’s serious intent and confidence in the market [15], which can constitute deterrence to new entry. Moreover, speedy expansion can help the firm to win goodwill from the host governments in that it bears witness to the potential and attractiveness of the host country investment environment. Good relationship with the local governments will in turn become a key competitive advantage that helps the firm to grow in the market and erect barriers to entry [47]. The economics-based positioning perspective therefore would propose that as the pace of expansion accelerates post initial entry, the firm should experience better market share performance.

**Hypothesis 1: The relationship between a firm’s pace of expansion and its performance in a foreign market is positive.**

**Hypothesis 1a: The higher the expansion frequency, the greater the performance.**

**Hypothesis 1b: The larger the expansion magnitude, the greater the performance.**

**Table 2.** Pace and performance: Summary of prior research.

Streams of Research	Findings on Pace & Performance	Examples of Research	Method
Organizational change	Quantum pace is better than incrementalism	Miller & Friesen, 1982	Correlation comparison
Decision making	Fast is good, esp. in high-velocity environments	Baum & Wally, 2003; Eisenhardt, 1989, 1990; Judge & Miller, 1991	Case studies; Regression; Structural equation model
Innovation & product development	Fast is good	Kessler & Chakrabarti, 1996; Schoonhoven <i>et al.</i> , 1990; Stalk & Hout, 1990; Vesey, 1991	Anecdotal; Analytical modeling
International expansion	Speed negatively moderates the relationship bet. Internationalization and firm performance	Vermeulen & Barkema, 2002	OLS regression

On the other hand, the resource-based view of the firm suggests that firm growth is both facilitated and constrained by its resources [48]. Resources, such as financial and human capital, are valuable and scarce. No firm can claim an unlimited supply of resources that can afford unconstrained growth at any pace imaginable. Firm growth may be halted because of lack of tangible resources like labor and physical assets, financial strength, or management capability [49] [50], or networks of suppliers and customers [51]. Penrose (1959) [48] argues that managerial capacity can only be built internally over time, which sets a limit to the pace at which a firm can grow. In fact, she argues that firm growth is limited only by internal managerial resources in the long run [48] [52]. When a firm expands in a foreign market, it needs a supply of qualified managers that have good knowledge about both the internal corporate routines and structure and the external local environment. Such knowledge can only be obtained through experience over time. As a firm speeds up its expansion in a short period of time, it will quickly deplete its supply of such qualified managers. In fact, it has been noted that Japanese firms are experiencing a decline in their use of expatriates, partly due to the lack of this precious resource [53]. With fast expansion in the foreign market, the firm can expect to have less time to assess and plan each subsequent establishment, less managerial attention to potential risks and problems each subsidiary may come across, and fewer competent managers to control and monitor each operation. Therefore, Penrose's resource-based view of firm growth seems to suggest that there ought to be a limit on how fast a firm can expand after its initial entry into a foreign market.

The behavioral perspectives of the firm [54] notably the organizational learning theory and internationalization theory, point more clearly to the disadvantages of a fast expansion. First, organizational learning happens when an organization collects second-hand information and/or experiential learning, synthesizes it into systematic knowledge, assimilates it into organizational memory, and finally institutionalizes it into organizational routines [55]. This process does not occur instantly. As a result, firms' capability development displays time compression diseconomies [56]. Fast-paced expansion can be harmful because it exacerbates the time compression diseconomies problem. Vermeulen and Barkema (2002) [35] argued that, for firms expanding internationally, time compression diseconomies may emerge for three reasons: 1) bounded rationality of managers makes search incomplete and decision-making imperfect [57]; 2) fast expansion results in "suboptimal time and attention" in screening, selecting, building and integrating new subsidiaries into the existing corporate networks; 3) high speed makes it difficult for organizations to learn from their experiences and "apply them throughout the organization". The result of imperfect decision-making, "suboptimal time and attention", and lack of learning will make it difficult for hastily established subsidiaries to survive, grow, or profit.

Also based on the behavioral perspective of the firm, internationalization theory emphasizes experience accumulation, uncertainty reduction and gradual resource commitment in a process model of foreign expansion. An overly fast-paced expansion may unnecessarily increase a firm's exposure to the uncertainty and risk of an emerging market [58] [59], and hence increase instability and decrease the performance of a foreign subsidiary. Over-fast expansion may also result in the firm outgrowing the market and thus creating overcapacity. Quite often, firms expand fast because they overestimate the market demand [60]. When the forecasted market potential does not materialize fast enough, the firm will end up over-invested and under-performing. These results could happen because the firm has over-committed to the foreign market before it has learnt enough about operating in the market and before the market uncertainty is reduced. Therefore, combining the arguments from the resource-based view and the behavioral perspectives of the firm, an inverted-U shape relationship between a firm's pace of foreign expansion and performance can be expected.

**Hypothesis 2: The relationship between a firm's pace of expansion and its performance in a foreign market is inverse-U shaped, where faster expansion first leads to better performance, but yield to diminishing and eventually negative performance at higher levels.**

**Hypothesis 2a: The relationship between a firm's expansion frequency and its performance in a foreign market is inverse-U shaped.**

**Hypothesis 2b: The relationship between a firm's expansion magnitude and its performance in a foreign market is inverse-U shaped.**

## 4. Method

### 4.1. Research Setting and Data Sources

#### 4.1.1. Foreign Direct Investment in the Chinese Auto Industry from 1985 to 2001

As pointed out by Hitt etc. (2001) [13], the challenge in testing the resource-based view of the firm is identifying

the most critical resources of firms. It is helpful to focus on a single industry in which critical resources are evident and measurable. China's auto industry has become one of the most attractive industries to foreign investors after 20 years' development [61] and the contracted foreign capital in this industry has surpassed US \$5 billion. By the end of 2000, the auto industry in China has established over 600 joint ventures with foreign investors from more than 20 countries and regions since it first utilized foreign capital in 1983. Almost every significant firm in the global automobile industry is present in the Chinese market, mostly in the form of international joint ventures. While previous literature has mainly focused on the joint venture/subsidiary level of analysis, few ever look at the strategic behaviors/decisions of firms at the country division level and their performance consequences. In this paper we have identified 214 foreign firms at country division level, tracked down their expansion path into the Chinese market in terms of expansion pace frequency and expansion magnitude. Country divisional level data is obtained by combining the data of its subsidiaries operating in China.

#### 4.1.2. Data Sources

Many secondary data sources were used to obtain data and cross verify the reliability of the data:

- 1) Online database for China's auto industry (1997-2001);
- 2) Directory of FDI in China (1984-1996);
- 3) Chinese Auto Industry Year Book (1983, 1985, 1987, 1989-2001);
- 4) Directory of FDI in China's auto industry (1996, 2000-2001 version);
- 5) Other sources such as trade journals, newspapers, books, etc.

Measures of Research Constructs.

## 4.2. Performances of Foreign Direct Investment

In the entry order research, market share has been used widely as a good measure to show the existence of the effect. It is also one of the most used objective performance measures in strategy literature as well as the international joint venture literature.

**Market share** is measured at market segment level to reflect the competitive forces in each relevant segment. The Chinese automobile market is categorized by 5 major market segments according to the 2001 Yearbook of Chinese Automobile Industry. They are automobile assembly, auto refit, motor vehicles assembly, engine, and auto components.

**Independent Variables.** Based on the extensive literature search on pace, we defined pace of market expansion as two-dimensional including expansion frequency and expansion magnitude. Expansion frequency is measured by average number of new entries per year since a firm's first entry to the market. In this measure, we are trying to find out how often a firm expands into the market. Expansion magnitude is measured by average number of employee increase at the country division level since its first entry.

**Control Variables.** Our single industry study design helps us to control for much of the industry and environmental variances that might have confounded our results. International market entry literature suggests that entry mode can influence the extent of the resource commitment, the degree of the project's local dependence [8] [62]. Therefore it could affect the relationship that we are examining. Since joint venture is the dominant form of FDI in China's auto industry and all the expansions identified in our sample are joint ventures, Entry mode has been controlled. We also include three other control variables, *i.e.*, firm size, timing of first entry, and initial investment, to exclude alternative explanations for firm performance. We used total number of employees (transformed to its natural log) at the country division to control for firm size and timing of first entry is measured by 2001 minus the year of first entry. The initial investment from the foreign firm usually includes not only capital investment but also the technology and management expertise, the latter two were typically factored in the total investment figure at negotiation stage. This measure can also be seen as the size of entry as used by Mascarenhas (1997) [9].

There are two approaches in measuring the timing of competitive market entry, the categorical or continuous. The categorical approach assesses entry order in terms of strategy types, such as first (early) mover, second mover and late movers [8]. This approach is often used for analyzing an oligopolistic industry or a market segment. The continuous approach sees entry as a degree of earlier/later; it measures timing by using the time difference in entry date and a specific date (it can be the date when the first mover came in). We are using this approach because it fits better with a competitive market with many firms.

## 5. Results

**Table 3** provides the means, standard deviations, and correlations for the study variables in the analysis. An Ordinary Least Square (OLS) model was used for hypotheses testing. Regression results for the tests of hypotheses are presented in **Table 4** (with market share as dependent variable). As shown in **Table 1**, the average timing of first entry is 7, which means entering in 1994. The average initial investment is 16 million dollars. The average expansion frequency is 0.22, which means on average, a firm establishes a new joint venture every four and half years. In terms of expansion magnitude, a firm expands on average 11 employees a year. This reflects the characteristics of our sample, which includes major assemblers with as many as 18788 employees as well as smaller part suppliers with only 10 people.

**Table 4** shows the results of our multivariate tests used to test our hypotheses where we began with a baseline model including just our control variables (Model 1). Comparisons in the model fit between this baseline model and the fully specified model (Model 3) provides an indication of the overall explanatory power of our hypotheses. In addition to these two models, we also presented one model with only the two independent variables plus control variables to determine their respectively independent effects on performance (Model 2), so as to compare our results with findings from prior research on pace/speed of expansion and firm performance. Model 3 incorporated the square term of expansion frequency and expansion magnitude. Overall, the results shown in **Table 4**, particularly given the dramatic increase of the explanatory power from Model 1 to Model 3, suggests the relevance and importance of pace of market expansion on firm's performance at country division level.

The baseline model, *i.e.*, Model 1, is significant, suggesting that firm size does have a significant positive impact on the market share. This result is consistent with industrial organizational literatures on firm size's impact on firm performance measured by market share. On the other hand, results across all three models suggest that initial investment do not have a significant impact on market share. This result is consistent with Mascarenhas's (1997) [9] finding that larger initial resource commitments do not result in higher market share and market survival in international markets. Timing is significant in the full model and is positively associated with market share. The result is also consistent with some of the previous studies on timing and performance relationships

**Table 3.** Means, standard deviations, and Pearson correlations.

Variable	Mean	S.D.	1	2	3	4	5	6	7
Timing	7.28	3.06							
Initial Investment	1589.96	5510.53	0.11						
Number of Employee	1314.95	2734.10	0.34**	0.40**					
Pace1 (Frequency)	0.22	0.17	-0.57**	-0.01	0.07				
Pace2 (Magnitude)	10.41	354.84	0.02	-0.10	0.14*	-0.06			
Profit/Employee	150144.00	447637.46	0.03	0.07	0.30**	0.25**	0.15*		
Market Share	0.0076	0.0297	0.17*	0.16*	0.56**	0.11	0.24**	0.79**	

\*  $p < 0.05$ , \*\*  $p < 0.01$ ;  $N = 213$ .

**Table 4.** OLS analysis: Market share as the dependent variable.

Independent Variables	Model 1	Model 2	Model 3
Timing	0.06	0.20**	0.32**
Initial Investment	0.03	0.07	0.08
Firm Size	0.38**	0.29**	0.03*
Pace1 (Frequency)		0.21**	0.84**
Pace2 (Magnitude)		0.23**	0.85**
Pace1*Pace1			-0.53**
Pace2*Pace2			0.72**
Model F	14.18	13.12	19.29
R 2	0.17	0.24	0.40
Adjusted R 2	0.16	0.22	0.38

The entries in the table are standardized regression coefficients ( $\beta$ ); \*  $p < 0.05$ , \*\*  $p < 0.01$ ;  $n = 214$ .

on international market entry [7] [8].

Hypotheses 1a and 1b predict relationships between the two dimensions of pace and firm performance. H1a stated that higher expansion frequency leads to greater firm performance. This hypothesis is strongly supported both in Model 2 (0.21,  $p < 0.01$ ) and Model 3 (0.84,  $p < 0.01$ ). Therefore, more frequent subsequent entries will help a firm capture greater market share. H1b predicts positive impact of larger expansion magnitude on firm performance. It is also strongly supported in Model 2 (0.23,  $p < 0.01$ ) and Model 3 (0.85,  $p < 0.01$ ). Therefore, the magnitude of subsequent market expansion beyond the first entry is also critical for better firm performance. These results indicate that pace of foreign market expansion is an important component of market entry strategy, especially in the context of emerging markets where market demand is still at the growth stage.

Hypothesis 2a argued that the relationship between a firm's expansion frequency and its performance in a foreign market is inverse-U shaped. This hypothesis is strongly supported in Model 3 ( $-0.53$ ,  $p < 0.01$ ). The result suggests that if a firm expands frequently after its first market entry, its performance will improve; however, if it establishes too many new ventures too fast, the combined complexity and uncertainty and the competing demands for resources will actually hurt the overall performance.

Hypothesis 2b suggested that the relationship between a firm's expansion magnitude and its performance in a foreign market is inverse-U shaped. This hypothesis is not supported. While the result is statistically significant (0.72,  $p < 0.01$ ), the sign of the co-efficient is opposite to our initial expected direction. The result seems to suggest that there is no limit to the positive relationship between post-entry expansion in large scale and firm performance. We suspect this finding can be better understood in the context of our special research setting, *i.e.*, China's automobile market from 1983 to 2001. The two decades saw the China's GDP grow in double digits. The market demand for cars and other type of vehicles grew with it. With just eight vehicles per 1000 residents in China in 2004—as opposed to 940 in the United States and 584 in Western Europe, the market is still at its rapidly growing stage and this has been reflected in our data set and the result. While this may limit the generalizability of our findings to developed countries, it can be applicable to other emerging markets experiencing similar rate of economic growth such as India, Brazil and Poland.

## 6. Discussion

The theoretical hypotheses of this study concern the relationship between pace of expansion and performance. Since there has been little prior research on pace of foreign expansion and performance, our hypotheses were exploratory in nature. The topic of the study has implications for the field of international business as well as strategic management in general. Prior research on FDI has focused mainly on the “whys” and “what’s” of foreign market entry strategies, paying little attention to what happens after firms' initial entries. This study takes a pioneering step towards an understanding of the post-entry foreign expansion path. Continued investigation on process-based features like pace, could lead to a fuller understanding of firms' foreign expansion strategies and processes. This study is also a country-level study of MNEs' pace of expansion and performance, which is a relatively ignored level of analysis in IB literature. Past studies tend to focus either at the corporate or the subsidiary level.

Time-related strategic features are increasingly getting attention in the strategy research community. Zott (2003:107) [20] for instance proposed that “the differential timing of resource deployment may foster the emergence of intraindustry differential firm performance”. There has been little understanding as to the how MNEs time and schedule their resource commitment in the foreign expansion process and whether these timing decisions matter. This study provides an empirical test on the relationship between the timing of resource commitment in a foreign market and firm's country level performance.

As to the managerial implication, this study is a test on the prevailing advocacy of fast organizational action. Only a few studies voiced cautions against possible “speed trap” [42] [63]. In fact, even in the concept of “speed trap”, the idea is that speed is good; only too much of it may lead to problems. The popular business press is almost always singing praises of speed, labeling companies that do not move fast enough “dinosaurs”. There is even a magazine called *Fast Company*. In the case of China, in spite of repeated reports on the difficulty of making profit in the emerging market, foreign investors rushed in. Many multinational firms quickly set up multiple subsidiaries, often in the hope of establishing a dominant position and making huge profit in the market sooner or later. The results of this study may provide some empirical proof as to whether and when the adoption of a fast pacing strategy can be beneficial.

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