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Entry timing into international markets: evidence from the Taiwanese service industry

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ABSTRACT
The aim of this study was to explain the determinants of service industry firms’ entry timing into new international markets. On the basis of the relevant literature, a framework was proposed comprising firm-specific, experience and industry factors. Linear regression analysis was conducted to examine the relationships between the factors, entry timing and subsequent performance. This study also investigated the timing of initial investment in a foreign market. The final sample contained 174 listed companies from various service industries in Taiwan. The latest financial data collected were from the year 2015. Based on the entry information of listed Taiwanese companies, the empirical results indicated that older firms exhibiting higher levels of internationalisation, having lower debt ratios and originating from more competitive sub-industries tend to enter new international markets earlier than other firms. Service industry companies exhibit superior performance if they enter the markets later. Furthermore, the study results support the idea that entry timing is a mediator between the factors and international performance, which helps companies achieve greater performance.

1. Introduction
A firm considering entry into a new geographical market must decide when to enter that market. Numerous studies have been conducted on the advantages of early market entry; for example, Min, Kalwani, and Robinson (2006) studied the controversial topic of whether market pioneers are at high risk or have a better chance of obtaining a large market share. However, some scholars have asserted that, through early entry, pioneers are in a disadvantaged position and their return on investment percentage points are lower than later entrants (Boulding & Christen, 2003); furthermore, they are at high risk (Lieberman & Montgomery, 1998). Other researchers have discussed the advantages of early entry and, in particular, the importance of early entry into the financial sector (López & Roberts, 2002).

Considering that entry timing is a crucial strategic decision that can affect a firm’s success and survival, researchers have recently turned to the antecedents pertaining to the timing
of a firm's entry into a new geographical market (Fuentelsaz, Gomez, & Polo, 2002; Gaba, Pan, & Ungson, 2002; Mitra & Golder, 2002; Tan & Vertinsky, 1996; Ursacki & Vertinsky, 1992). Numerous studies have shown that choice of entry timing has critical implications for a firm's post-entry performance in the market (Isobe, Makino, & Montgomery, 2000; Luo & Peng, 1998; Mascarenhas, 1992, 1997; Pan, Li, & Tse, 1999; Song, Di Benedetto, & Zhao, 1999). For instance, early entrants in new markets have often been reported to achieve greater market shares, but they also have higher exit rates (Lieberman & Montgomery, 1998).

The same characteristics that help firms to benefit from early entry may also provide them with the organisational slack to defer entry decisions until market uncertainty is resolved. To understand how these firm characteristics influence entry timing requires a comparison of the effect of firm resources in regard to early entry versus deferred entry (Tan, Hung, & Liu, 2007).

With the development of services in the world, the topics of service multinationals enterprises (S.M.N.E.), the globalisation of services and entry of service firms into foreign markets have been extensively researched among scholars. Scholars have begun to question service firms' manner of entry into international markets (Dunning, Blomström, & Kogut, 1990; Hood & Young, 2000; Rugman & Verbeke, 1998, 2001, 2002, 2003, 2004, 2005), strategy (Agarwal & Ramaswami, 1992; Barney, 1986, 1996; Klier, Welge, & Harrigan, 2009), entry timing (Boulding & Christen, 2003, 2008, 2009; Brito & Mello, 1995; Buckley & Casson, 1981) and other aspects related to the internalisation of the service industry. Service firms are considered to follow their clients when they identify an opportunity and sometimes they are almost forced to do so (Vandermerwe & Chadwick, 1989; Weinstein, 1977).

Entry timing is one of the main characteristics discussed when scholars examine outward foreign direct investment (F.D.I.) and foreign market entry. This is because entry into foreign markets is crucial for any company. Pioneer companies gain specific advantages over late-entry firms; however, they also encounter greater risks and disadvantages. Therefore, entry timing has become an appealing topic for researchers. The following questions require answers: (1) When is the optimal time for entry? (2) Is it more prudent to be earlier than competitors or to wait and enter later, thereby avoiding risk but sharing a more saturated foreign market?

Some companies attempt to enter the foreign market earlier to gain competitive advantages. Opportunities exist to capitalise on economies of scale, gain reputation and amass customer loyalty. Researchers, including Lilien and Yoon (1990) and Tuppura, Saarenketo, Puumalainen, Jantunen, and Kyläheiko (2008), have agreed that one of the most pivotal reasons for success can be entry timing. If a company has a new idea that is ready for release into a market or if it simply releases it earlier than its competitors, a greater chance exists for them to not only captivate the public, but also maximise perceptual positions and capture distribution channels (Lieberman & Montgomery, 1988). However, despite the numerous advantages to pioneering a market, numerous scientists have indicated the risks and disadvantages involved, such as the elevated costs, time-consuming nature and multitude of pitfalls for failure in new foreign markets (Song & Montoya-Weiss, 1998); these often arise through pioneers meeting obstacles, such as lack of knowledge or resources, and also limited access to distribution networks. Furthermore, chances always exist to confront ethnocentrism and cultural differences, which can lead to lowered chances of gaining customers.
The objectives of this study are to determine the entry timing of Taiwanese S.M.N.E., the moderating role of entry timing, the performance of Taiwanese S.M.N.E. in new international markets and the influence of firm factors on performance and entry timing.

2. Literature review

A firm’s decision to internationalise can be influenced by both internal and external factors (Dunning, 1980). The company must possess firm-specific advantages that can efficiently be transferred internationally (Chang, 1995; Dunning, 1980; Hymer, 1976). This study examined the firm-specific factors of companies that plan to internationalise.

2.1. Firm-specific factors

The first firm-specific factor that we selected was firm size, because it is a critical factor reflecting a company’s capacity and capabilities. The second was foreign ownership, because it is connected to a firm’s internal structure and investment policy. The last was economy of scope, which becomes a critical factor when a firm makes the decision to internationalise, because—in our opinion—it reveals whether the company has a broad spectrum of firms to internationalise and how it can influence the entry timing decision.

2.1.1. Firm size

Large firms compared with smaller firms tend to invest earlier in a foreign market. Their greater resources can increase their ability to cope with the disadvantages and problems faced in foreign markets and to act more successfully under uncertainty. Furthermore, Dunning (1988) argued that large companies have a tendency to integrate operations regionally or globally because they have more opportunities to achieve economies of scale and scope. Lieberman and Montgomery (1998) also asserted that large companies can act pre-emptively to limit later entrants’ access to resources such as local suppliers, markets and consumers. Large companies have more resources to act under uncertain circumstances and in foreign markets under uncertainty.

2.1.2. Debt ratio

Compared with other firms, firms with a lower debt ratio tend to invest earlier in foreign markets. A firm’s capital structure can affect the behaviour of the company through influencing their desire to either take risks or maintain low-profile strategies (Long & Ravenscraft, 1993). Fong (1995) and Long and Ravenscraft (1993) have connected a firm’s debt to organisation controls. Debt financing firms are not appropriate to contest in F.D.I. situations, and those firms prefer to engage in lower risk investment projects and press the management to postpone investments; therefore, they enter the foreign market later to avoid the main risks.

2.1.3. Foreign shareholder

Compared with companies with a smaller percentage of foreign shareholders, companies with a higher percentage often enter the market earlier. Foreign ownership is a vital element of the decision-making process, because shareholders can apply pressure to management decisions and attempt to persuade firms to act in their interests. Shareholders are a crucial group of stakeholders who steer management and corporate activities. Having a larger
number of foreign shareholders can influence a firm to enter a foreign market earlier. Because they are not local shareholders, they will possibly be willing for the company to enter or begin to operate in the foreign market.

2.1.4. Scope economies
Compared with firms with a narrower scope of services, firms with a broader scope enter new foreign markets earlier. A broader scope allows a company to develop synergy in the various product sectors (Shaver, Mitchell, & Yeung, 1997). This interaction leads to both efficiency and quality in product development, expanding the range of products, production, distribution and market support (Lambkin, 1988). Therefore, a firm with a scope economy is more confident of having the right product and greater chances of success when entering a market earlier.

Hypothesis 1: Firm-specific factors (including firm size, debt ratio, foreign shareholders and scope economies) influence foreign market entry timing.

2.2. Experience factors
In our study, age was a proxy for firm experience. This is because, with time, a company learns more techniques, attains more knowledge and implements new strategies. We believe that a company’s experience is critical when entering new international markets. Managerial incentives were used as a proxy for management efficiency, which includes management experience in foreign operations and entry market strategies. We used the degree of internationalisation as the level of a firm’s international experience; because this is measured using the number of countries where a firm conducts operations, it shows how experienced a firm is in regard to factors such as cultural knowledge, local markets and foreign operations.

2.2.1. Firm experience
Linked to knowledge, experience and number of assets is firm age. Older companies possess more experience, more human resources, more knowledge, better access to suppliers and distribution networks, broader networks of foreign operations and greater advantages over newcomers. Freeman and Hannan (1989) proposed that firm age can reduce the probability of demise for those firms that survive the ‘liability of newness’ stage. Stinchcombe (1965) indicated that liability of newness characterises the tendency of new firms to have higher failure rates. Barnett and Amburgey (1990) and Baum and Mezias (1992) have asserted that, after firms survive the initial turbulent period, they receive long-term benefits and the risk of failure is diminished. Moreover, the age of a firm can bestow confidence and the necessary resources to enter the market as pioneers. Compared with younger companies, older companies tend to enter the market earlier.

2.2.2. Management efficiency
Human resources are one of the most critical components for a company (Grant, 1996); therefore, we assumed that managerial incentives affect F.D.I. decisions. Morck and Yeung (1991) were among the first researchers to assume that managers play a vital role in the decision-making process. Mishra and Gobeli (1998) furthered this topic when they proposed that managerial incentives lead to the motivation of managers. We are certain that
sufficient managerial incentives attract gifted managers to lead outward F.D.I. in new foreign markets. Thus, we consider that managers will attempt to act earlier and have a more aggressive strategy because they are confident in their results. Firms with higher managerial incentives tend to invest earlier in foreign markets.

2.2.3. International experience
Sullivan (1994) argued that companies that are more involved in international markets possess more experience and knowledge associated with international operations and benefit from this; therefore, their market network can be assumed to be extended, compared with other companies with a lower level of internationalisation (Shaver et al., 1997). Because they can use their knowledge and experience more readily, firms with a higher degree of international experience are likely to enter newly opened international markets earlier than firms with a lower level of international experience.

Hypothesis 2: Experience factors (including firm experience, management efficiency and international experience) influence foreign market entry timing.

2.3. Industry factors
Not only internal factors influence firms’ entry timing decisions. We selected factors relevant to the environment of an industry. External factors also exist, such as environmental, political and social factors.

2.3.1. Competitiveness
The nature of competition and industry structures influence firms’ entry timing decisions and performance; therefore, we selected competitiveness as a factor and examined it. Competitors’ behaviour supposedly influences firms’ choices for entry timing and a competitive environment can influence performance. Mitchell (1991) proposed that firms tend to enter the market earlier when numerous firms exist in the industry and competition is high. Firms in more competitive industries are likely to enter the market earlier than firms from less competitive industries.

Hypothesis 3: The industry factor of competitiveness influences foreign market entry timing.

2.4. Effects of entry timing on performance
Lieberman and Montgomery (1988) were among the main researchers of the advantages and disadvantages of early entry. Multiple papers have empirically proven the positive correlation between early entry and performance. The advantages include little competition, as well as the ability to achieve a strong market position, the establishment of relationships with local stakeholders (Alpert & Kamins, 1995; Buckley & Casson, 1981), the opportunity to construct barriers for later entrants and the chance to monopolise the market (Luo, 2002; Schoonhoven, Eisenhardt, & Lyman, 1990). However, numerous disadvantages have also been exposed in studies, such as the lack of knowledge, resources and human capital in the face of sufficient management (Beamish & Inkpen, 1998). Market pioneers face uncertainty because of a lack of information and experience. Despite some disadvantages, companies generally prefer to enter markets earlier, in an attempt to gain short-term profits.
Hypothesis 4: Early entrants tend to exhibit superior performance compared with late entrants in a foreign market.

2.5. Effects of firm-specific, experience and industry factors on performance

This study attempted to determine the mediating effect of entry timing on firm performance. We were interested in not only determining the factors affecting entry timing, but also examining the direct effect of the same factors on performance. This could be a fully mediating or partially mediating relationship. Firm-specific factors such as firm size, debt ratio, foreign shareholders and scope economies directly affect firm performance; experience factors such as firm experience, management efficiency and international experience directly affect firm performance. Finally, the industry factor of competitiveness directly affects firm performance (Figure 1).

Hypothesis 5: Firm-specific, experience and industry factors influence firm performance.

3. Method

3.1. Data and sample

In this study, a firm-level analysis was employed. Specifically, the timings of initial investment in foreign markets were investigated. The original sample consisted of 395 listed companies from various sub-categories of the service industry. The main distinctive features of the listed companies were greater reliability, typically larger size and more historical data. The financial data collected were from the year 2015. A major resource for the data was the Taiwan Economic Journal (TEJ) database. The TEJ database is typically used to obtain information about company attributes, financial status and details of long-term investments. The other main sources of data were the Ministry of Economic Affairs of Taiwan website and statistics from the Investment Commission of Ministry of Economic Affairs. Using their statistics, we could examine the structure of the Taiwanese service sector and the total number of Taiwanese outward F.D.I.

Figure 1. Conceptual framework. Source: From this research.
3.2. Measurements

3.2.1. Dependent variables

3.2.1.1. Entry timing. Entry timing focuses on the time of a Taiwanese company’s first investment in a foreign market. In this study, only the first investment was analysed, despite the fact that several investments in the country could have occurred. The entry timing was measured using the difference between the first year of first entry and current year; for example, if the entry year was 1988 and the current year is 2016, then the difference was coded as 28 (2016–1988).

3.2.1.2. Performance. Performance can be measured using numerous methods. The common measure used by scholars is the financial performance measure, which measures a firm’s overall efficiency and performance. However, in general, two performance measures are available: financial and non-financial. Crabtree and DeBusk (2008) measured financial performance using key performance indicators, such as return on assets (R.O.A.) and earnings before interest and income tax (E.B.I.T.). They are the most common because of their availability. R.O.A. and return on sales (R.O.S.) have also been used by Geringer, Beamish, and Dacosta (1989) and Sullivan (1994). In this study, R.O.A. was chosen as a measure of performance.

3.2.2. Independent variables

Firm-specific factors include firm size, debt ratio, foreign shareholders and scope economies.

3.2.2.1. Firm size. To measure firm size, numerous measures have been used by researchers, such as sales volume, equity and deposits (Cho, 1986); number of employees (Norburn & Birley, 1988); and domestic market sales (Kimura, 1989). We considered using two measures: total assets and number of employees. The measure total assets was used by Kogut and Singh (1988) and number of employees was used by Yu and Ito (1988). Ultimately, we selected total assets as our measurement.

3.2.2.2. Debt ratio. Debt ratio has been used as a measurement frequently in numerous types of research. For example, Schwarz and Aronson (1967) used debt ratio as a proxy for business risk. Various debt/leverage ratios have been used in entry timing-related papers. Debt ratio is used as a proxy for the debt position of a company. When selecting the measure for debt ratio, we considered some of the following: debt ratio as long-term debt as a percentage of total capital, long-term debt divided by total assets and the market value of equity divided by total assets (Byrd & Mizruchi, 2005). However, considering the limitations of our database, we selected the easiest debt ratio measure, which is total debt divided by total assets.

3.2.2.3. Foreign shareholders. Foreign ownership was measured by the total number of foreign shareholders’ total percentage. This measurement was used in Lee’s (2008) study. Another measure, used by Mueller, Dietl, and Peev (2003) and Nenovsky, Peev, and Yalamov (2003), was dummy variables, where they have measured the degree of offshore ownership on a scale from 0 to 4.
3.2.2.4. **Scope economies.** Kerin, Varadarajan, and Peterson (1992) made a proposition about scope economies and entry into new markets. They suggested that those companies with a broader scope are strategically better prepared to face the uncertainty of new international markets. To measure the scope of economies, we used the number of business sectors that the company participates in. To categorise business sectors, we used Standard Industrial Classification codes.

Experience factors include firm experience, management efficiency and international experience.

3.2.2.5. **Firm experience.** For firm experience, we considered the two measures, namely listing age and establishment age. Multiple researchers have used listing age (Fama & French, 2001; Pastor & Veronesi, 2003). Pastor and Veronesi (2003) declared that listing age is the superior measure of determining when a company was genuinely established. Despite some researchers preferring listing age (such as Shumway, 2001), we selected establishment age (i.e., not when the company was listed, but the actual date of establishment). Firm age was calculated using the difference between the current year and the year the company was established.

3.2.2.6. **Management efficiency.** Managerial incentives represent the monetary rewards provided by a firm. We obtained these values through determining the ratio of management compensation to total sales.

3.2.2.7. **International experience.** International experience is measured using the degree of internationalisation. Two measures are typically considered. The first is the number of geographic segments in which a company is presented, which was used by Sullivan (1994). The second is the foreign sales percentage of a firm’s total sales. In our study, we used the first measure.

3.2.2.8. **The industry factor competitiveness.** For competitiveness, we examined sub-industry competitiveness, which is represented by numbers of domestic competitors present in the same sub-industry. We used the number of competitors in that year (Wernerfelt & Karnani, 1987) as a base to develop the variable of competitiveness.

3.3. **Control variables**

We controlled the variable firm size, which was measured by the number of employees. The variable did not exhibit significant results. All variables were collected from the TEJ database.

3.4. **Analysis**

In this study, we applied a linear regression analysis, proceeding from the fact that our sample size revealed every instance of investment as a terminal event. We considered this to be a strong method of determining the relationships between predictors and the time-to-event.
4. Result

4.1. Descriptive results

Out of 390 firms in the primary sample, only 174 made their initial entry into foreign markets. Table 1 presents the sample characteristics.

Our sample included Taiwanese service sector listed companies from the following industries, based on the TEJ industry index: financial, insurance (life and realty), telecommunications, securities, cultural and creative, shipping and transportation, tourism, trading and consulting, printing and information service industries. The majority of entrants were from the periods 2000–2005 and 2011–2015. A company’s size, based on its total assets, was mostly measured on a scale from 1 mln to 500 mln. Most of the companies had fewer than 1000 employees and were over 10 years old.

The descriptive statistics and correlations between variables (Table 2) did not reveal serious multicollinearity among the independent variables. We subsequently tested the hypotheses using regression analysis.

4.2. Main results

Table 3 shows the main results of our empirical testing and introduces the five models used to calculate the results of our research. Model 1 presents the coefficient of control variables, which was positive and non-significant. Model 2 was used to test the firms’ experience factors, which showed significant coefficients for every factor. These results demonstrate the importance of firm experience during the entry timing decision-making process. The results imply that older firms \( (b = 0.205, p < 0.005) \) with higher levels of internationalisation

<table>
<thead>
<tr>
<th>Table 1. Sample characteristics.</th>
<th>Samples</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry timing (year difference)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1980–1990 (28–26)</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>1996–1999 (20–17)</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>2000–2005 (16–11)</td>
<td>51</td>
<td>27</td>
</tr>
<tr>
<td>2006–2010 (10–6)</td>
<td>35</td>
<td>18</td>
</tr>
<tr>
<td>2011–2016 (5–1)</td>
<td>45</td>
<td>24</td>
</tr>
<tr>
<td>Asset (NTD)</td>
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<tr>
<td>&lt; 1,000,000</td>
<td>43</td>
<td>22</td>
</tr>
<tr>
<td>1,000,000–500,000,000</td>
<td>136</td>
<td>70</td>
</tr>
<tr>
<td>500,000,000–1,000,000,000</td>
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<td>3</td>
</tr>
<tr>
<td>&gt; 1,000,000,000</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>Debt ratio (%)</td>
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<tr>
<td>&lt; 10</td>
<td>104</td>
<td>54</td>
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<td>10–30</td>
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<td>26</td>
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<tr>
<td>&gt; 30</td>
<td>38</td>
<td>20</td>
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<tr>
<td>Managerial incentives (%)</td>
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<td></td>
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<tr>
<td>&lt; 5%</td>
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<td>89</td>
</tr>
<tr>
<td>&gt; 5%</td>
<td>12</td>
<td>11</td>
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<td>Foreign ownership (%)</td>
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<td>&lt; 5%</td>
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<tr>
<td>&gt; 5%</td>
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<td>Age (year difference)</td>
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<td>1–5</td>
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<tr>
<td>&gt; 50</td>
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<td>&gt; 5000</td>
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Source: From this research.
### Table 2. Means, standard deviations and correlations.

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<th></th>
<th>M</th>
<th>SD</th>
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<td>4791.43</td>
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<td></td>
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<td></td>
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<tr>
<td>Entry timing</td>
<td>12.80</td>
<td>7.64</td>
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<td></td>
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<td>Performance</td>
<td>522</td>
<td>40.50</td>
<td>1</td>
<td>0.010</td>
<td>0.046</td>
<td>0.004</td>
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<tr>
<td>Firm size</td>
<td>1.83</td>
<td>6.99</td>
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<td>0.683*</td>
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<tr>
<td>Debt ratio (%)</td>
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<td>0.17</td>
<td>1</td>
<td>0.310**</td>
<td>0.089</td>
<td>0.157*</td>
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<td>Foreign ownership (%)</td>
<td>16.72</td>
<td>20.73</td>
<td>1</td>
<td>0.231**</td>
<td>0.193*</td>
<td>0.176*</td>
<td>0.090</td>
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<td>Scope economies</td>
<td>1.51</td>
<td>1.03</td>
<td>1</td>
<td>0.338**</td>
<td>0.038</td>
<td>0.255**</td>
<td>0.179*</td>
<td>0.068</td>
<td></td>
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<tr>
<td>Age</td>
<td>26.95</td>
<td>16.01</td>
<td>1</td>
<td>0.041</td>
<td>0.651**</td>
<td>0.130</td>
<td>0.222**</td>
<td>0.025</td>
<td>0.015</td>
<td>0.015</td>
<td>0.483**</td>
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<tr>
<td>Level of internationalisation</td>
<td>5.01</td>
<td>4.97</td>
<td>1</td>
<td>0.154*</td>
<td>0.647**</td>
<td>0.053</td>
<td>0.164*</td>
<td>0.322**</td>
<td>0.123</td>
<td>0.122</td>
<td>0.483**</td>
<td></td>
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<tr>
<td>Managerial incentives (%)</td>
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<td>0.018</td>
<td>1</td>
<td>0.190*</td>
<td>0.156*</td>
<td>0.089</td>
<td>0.147</td>
<td>0.117</td>
<td>0.062</td>
<td>0.006</td>
<td>0.126</td>
<td>0.097</td>
<td>0.483**</td>
</tr>
<tr>
<td>Competitiveness</td>
<td>24.79</td>
<td>11.45</td>
<td>1</td>
<td>0.069</td>
<td>0.177*</td>
<td>0.010</td>
<td>0.072</td>
<td>0.117</td>
<td>0.049</td>
<td>0.111</td>
<td>0.045</td>
<td>0.170*</td>
<td>0.076</td>
</tr>
</tbody>
</table>

Notes: **Correlation is significant at the 0.01 level (2-tailed).  
*Correlation is significant at the 0.05 level (2-tailed).  
Source: From this research.
(b = 0.650, p < 0.005) within competitive industries (b = 0.062, p < 0.1) are likely to enter international markets earlier. This model reveals that knowledge-based resources are crucial. Model 3 was designed to test the firm-specific factors in highly competitive industries. We observed positive and significant results for the factors debt ratio (b = 12.898, p < 0.005), scope economies (b = 0.765, p < 0.01) and competitiveness (b = 0.082, p < 0.005), implying that companies with lower debt ratios and broader spectrums of products from highly competitive industries tend to enter new international markets earlier. Furthermore, a negative significant coefficient was observed for foreign ownership (b = −0.071, p < 0.05), revealing that companies with a higher percentage of shareholders tend to enter foreign markets later.

After analysing Models 2 and 3, we attempted to use specific factors for Model 4. We selected factors that we considered to be crucial for modern service companies when entering new markets, in addition to selecting factors that had already shown significant results in the previous models. Accordingly, we selected firm size, firm age, level of internationalisation and managerial incentives. Evidently, we selected all firm experience factors, in addition to firm size; this is because we believed firm size to be crucial for entry timing decision-making, especially because, in this study, firm size was measured by total assets. Specifically, firm size was included in our study to determine whether the number of assets influences a company’s decision to enter markets earlier or whether firm size influences entry timing. Model 4 factors all showed significant coefficients. Excluding firm size, all factors were positive and indicated earlier entry. Moreover, firm size exhibited negative and significant results.

Model 5 shows the main results relating to Hypothesis 1. We predicted that larger firms tend to enter earlier than smaller firms. The coefficients of firm size were negative and significant (b = −1.173E-9, p < 0.01). The hypothesis suggested that firms with lower debt ratios are likely to enter international markets earlier. As expected, the results were positive and significant (b = 3.379, p < 0.05). The hypothesis further stated that firms with a higher percentage of foreign ownership tend to enter the markets earlier. However, scope economies did show significant results (b = −0.024, p < 0.1). In summary, the results support Hypothesis 1, revealing that firms with a smaller size, lower debt ratios and higher percentages of foreign ownership are likely to enter international markets earlier.
However, one variable was not supported (H1 - Firm size). Among the numerous possible reasons for this result, we believe it to be related to the specific industry of the firms under investigation. Service industry firms are more mobile and not heavily reliant on resources. Furthermore, we selected total assets as a measure of firm size; thus, we can assume that smaller companies with smaller assets that are more mobile tend to enter the international market earlier.

In Hypothesis 2, we suggested that firms with a more extensive line of products are likely to enter international markets earlier. The coefficients did not show significant results, which was contrary to our expectations ($b = 0.229$, $p < 0.1$). We tested the hypothesis, predicting that firm age is positively related to early international market entry. Consistent with our expectations, the results were positive and significant ($b = 0.196$, $p < 0.005$). This means that older and more experienced companies are not reluctant to enter international markets earlier. The hypothesis stated that firms with higher levels of internationalisation are likely to enter international markets earlier. As expected, the coefficients of the level of internationalisation were positive and significant ($b = 0.615$, $p < 0.005$), which suggests that international experience and a broad international network help firms to enter new markets earlier. In summary, the results support Hypothesis 2, revealing that older companies with more international experience are likely to enter earlier.

Finally, we tested Hypothesis 3, which was related to the single industry factor competitiveness. We predicted that, the greater the number of competitors in a given industry, the more aggressive the behaviour of a firm and the greater the likelihood of the firm to enter international markets earlier. Consistent with our expectations, the coefficients of competitiveness were positive and significant ($b = 0.055$, $p < 0.05$), supporting Hypothesis 3.

Table 4 shows the results of testing Hypothesis 4, which concerned the relationships between earlier entry and performance.

Contrary to our expectations, the estimation results showed that the market pioneers from the Taiwanese service sector showed negative performance ($b = -0.282$, $p < 0.005$). This could mean that these results have some limitations and that results may vary greatly in future research. The results can also be connected to our measurement of performance. However, they can also support previous researchers who found that later entrants showed better performance, whereas pioneers may perform worse in oversaturated markets and under uncertain situations with high risks. The results do not support Hypothesis 4.

The factors influencing entry timing are firm size, debt ratio, firm age, level of internationalisation and competitiveness. This means that all three factor types (firm-specific, experience and industry) have a significant effect on earlier entry. Firms with a higher level of internationalisation enter international markets earlier; therefore, knowledge-based capabilities are no less valuable than firm-specific factors in the early entry decision-making process.

Table 4. Regression results of entry timing and performance.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Beta (S.E.)</th>
<th>t-value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control variableNumber of employees</td>
<td>0.000 (0.000)</td>
<td>0.634</td>
<td></td>
</tr>
<tr>
<td>Entry timing to performance</td>
<td>$-0.282^{***}$ (0.108)</td>
<td>$-2.601$</td>
<td>Not support</td>
</tr>
<tr>
<td>F-value</td>
<td>3.567</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted R-square</td>
<td>0.029</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: $^{***}p < 0.005; ^* p < 0.05$.
Source: From this research.
Moreover, competitiveness is another notable factor; supporting our hypothesis is the fact that firms tend to be influenced by competitor behaviour and follow other companies into international markets in an attempt to occupy a worthy place in the new markets.

Table 5 presents the results of our investigation of the factors affecting performance. We constructed five models to examine which factors have the greatest influence on firm performance. In Model 7, we examined the relationships between the control variables and entry timing; the results were significant. Model 8 was used to test the experience factors. According to our hypothesis, firm age \((b = -0.116, p < 0.005)\) and managerial incentives \((b = 13.892, p < 0.005)\) had a negative relationship and the results were significant. The results can be linked to firms’ loss of inertia and their ability to adjust quickly to an environment, which leads to weakening performance. The degree of internationalisation and industry factors did not exhibit significant results. Firm-specific factors were tested in Model 9 and they all showed significant results. Firm size showed significant and negative results. This means that larger companies show lower performance, which confirms previous studies reporting the same results (Baumol, 1962; Marris, 1964; Williamson, 1963).

Contrary to our expectations, scope economies showed significant results, but in the opposite direction, which supports the studies of Carman and Langeard (1980) and Normann (1984), who have stated that the diversification of products by service companies has a negative effect on performance. We constructed Model 10 after observing the results from Models 8 and 9. We selected the factors that showed the most significant results and incorporated them into this model. Thus, all results derived from Model 10 were significant, in addition to supporting our hypothesis. This model exhibited the highest adjusted \(R\)-square.

We constructed Model 11 after observing the results of the previous model. Firm size coefficients were negative and significant \((b = -5.027E-9, p < 0.005)\), which again proves the negative effects of firm size on both performance and entry timing in our sample; this finding can be attributed to a negative and significant coefficient of managerial incentives.

### Table 5. Regression results of influencing factors and performance.

<table>
<thead>
<tr>
<th></th>
<th>Model 7</th>
<th>Model 8</th>
<th>Model 9</th>
<th>Model 10</th>
<th>Model 11</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Control variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of employees</td>
<td>0.000*** (0.00)</td>
<td>2.254E-5 (0.00)</td>
<td>0.001*** (0.00)</td>
<td>0.000** (0.00)</td>
<td>0.000** (0.00)</td>
</tr>
<tr>
<td>Firm size</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debt ratio</td>
<td>−5.314E-9*** (0.00)</td>
<td>−5.225E-9*** (0.00)</td>
<td>−5.207E-9*** (0.00)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreign ownership</td>
<td>−7.276* (4.66)</td>
<td>−6.391* (4.63)</td>
<td>−7.532* (5.05)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scope economies</td>
<td>−1.187* (0.85)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Experience</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm age</td>
<td>−0.116** (0.06)</td>
<td>−0.096** (0.05)</td>
<td>−0.087* (0.06)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Degree of internationalisation</td>
<td>−0.160 (0.20)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Managerial incentives</td>
<td>−131.892*** (46.67)</td>
<td>−132.477*** (44.93)</td>
<td>−133.912*** (45.97)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Industry factor</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competitiveness</td>
<td>−0.012 (0.073)</td>
<td>0.012 (0.073)</td>
<td></td>
<td>−0.005 (0.074)</td>
<td></td>
</tr>
<tr>
<td>Adj. (R)-square</td>
<td>0.029</td>
<td>0.054</td>
<td>0.079</td>
<td>0.126</td>
<td>0.120</td>
</tr>
<tr>
<td>(F)-value</td>
<td>4.663</td>
<td>2.925</td>
<td>3.378</td>
<td>5.007</td>
<td>3.509</td>
</tr>
</tbody>
</table>

Notes: ***\(p < 0.005\); **\(p < 0.01\); *\(p < 0.05\).
Source: From this research.
F. Y. Lo and K. ALENA (b = −13.912, p < 0.005) on the basis of principal-agent theory (Jensen & Meckling, 1976; Morck, Shleifer, & Vishny, 1988). The debt ratio coefficient was also significant and negative (b = −7.532, p < 0.05), which was in line with our expectations. Foreign ownership showed significant and positive results, which is supported by the findings of other relevant studies (Ahmadjian & Robbins, 2005; Baba, 2009; Douma, George, & Kabir, 2006). As expected, the firm age coefficient was negative and significant (b = −0.087, p < 0.01). Scope economies, degree of internationalisation and competitiveness did not exhibit any significant results in any of the models, except for scope economies in Model 9. Through analysing the data, we determined that, in general, firm-specific factors exhibited greater effects on performance, whereas experience-related factors exhibited more significant effects on entry timing; these results support Hypothesis 5.

We believe the results of this study to be of great interest. They can serve as a reference for studies on the role of entry timing in firm performance. Most of the significant results for the relationships between firm factors and performance were negative, whereas the same factors showed positive relationships with entry timing. Thus, we assert that our argument for a mediating effect of entry timing is correct and that firms must choose the correct entry timing to achieve optimal performance.

5. Conclusion

5.1. Discussion

This study examined the determinants of the entry timing of Taiwanese service sector firms into new international markets. We assumed that entry timing decisions are determined through firm-specific, industry, and experience factors. Our research results clearly reveal that firms that are likely to enter international markets earlier are influenced by experience (degree of internationalisation and firm age) and industry factors (competitiveness). The results indicate that firm-specific factors are more sensitive. Large companies actually defer entry into new foreign markets. However, regarding firm size, the reason for the observed negative result could be the selection of an inappropriate measure or simply the fact that mobile service companies with smaller assets are likely to enter international markets earlier than larger companies with greater assets. We also used another measure of firm size to obtain other results; however, the results again reveal a negative and non-significant coefficient. Another factor showing negative and opposing results to our expectations was managerial incentives. We hypothesised that companies with higher managerial incentives are more confident and have more experience and, thus, enter new foreign markets earlier than competitors. However, all variables showed negative coefficients, thus implying later entry. These results can be explained as follows. We can assume that a firm’s management would not choose to enter a new international market if the market promises high risks and uncertainty. In addition, experienced management may choose to defer entry and follow later or decide that the firm will select a free-riding strategy. Other explanations could be limited by database or sample size.

Our results support the hypothesis that early entrants into new international markets from the Taiwanese service sector will exhibit superior performance over other entrants. Numerous discussions have been devoted to the advantages and disadvantages of early market entry (Lieberman & Montgomery, 1988) and the importance of entry timing (Huff
We assert that entry timing is a crucial strategic decision that helps companies to perform successfully in new international markets. Therefore, in addition to excluding standard empirical results and testing the connection between the factors influencing entry timing decisions, we attempted to determine early entry as the mediator in the relationship between the factors and performance to show its strategic importance.

### 5.2. Concluding remarks

To construct our framework, we studied numerous prominent studies on the relationships between firm factors and entry timing and entry timing and performance (Grewal, Cline, & Davies, 2003; Huff & Robinson, 1993; Johanson & Wiedersheim-Paul, 1975; Lieberman & Montgomery, 1988; Madsen & Servais, 1997). Although all the factors used in our research have been widely used in empirical studies, we argue that not all of them have been broadly and continually studied.

A study was conducted to guide our thesis, which was based on the findings and literature reviews of other relevant studies. We created a linear logarithm to examine the relationships between company factors, entry timing, and performance.

In our research, we answered the question of which factors affect entry timing and how they influence foreign market entry timing decision-making. The results of the empirical study show that the factors affecting entry timing are firm size, debt ratio, firm age, managerial incentives, the degree of internationalisation and competitiveness. All factors, except for firm size and managerial incentives, showed positive and significant results. The results for firm size and managerial incentives can be attributed to management ownership and the principal–agent problem, which is when management personnel prioritise their self-interests.

Another question we answered in our research was which factors affect firm performance and how they influence this performance. We conclude that factors influencing firm performance are firm size, debt ratio, foreign ownership, firm age and managerial incentives. All factors, except for foreign ownership, showed negative relationships with firm performance.

In addition, we investigated the effect of entry timing on performance and discovered that earlier entrants exhibit more positive results than later entrants. We also conclude that entry timing is a strategically critical decision, which can influence company performance in new international markets.

### 5.3. Contribution

First, we conducted this study using the latest data, thus filling the gaps between previous findings, recently proposed factors and current scientific fields. Moreover, the study contributes to the understanding of when a company should invest in new international markets, which is beneficial to Taiwanese service sector firms. The study extends knowledge about the relationships between factors, entry timing and performance.

### 5.4. Limitations and future research directions

The first limitation of this study is the database. Our sample included only listed companies, which does not represent the total of Taiwanese firms, thus limiting the generalisability of
the findings. To address this limitation, future studies can compare the investing behaviours of other companies from various countries, which can increase the generalisability of the findings. In addition, despite the significant results in this empirical study, which demonstrated a positive relationship between entry timing and performance, a low adjusted $R^2$-square value was observed; this can be addressed in future studies by including various other factors to examine this relationship. Another limitation is the data collection period considered in our research. We examined only data from 2015. Therefore, future studies can consider a period of 5 or 10 years to clearly observe any patterns. Rather than consider linear relationships, we attempted to test entry timing as a mediator in the relationships between factors and performance. This is because we consider the relationships between firm characteristics and entry timing to be more complicated than they seem. Future research should observe non-linear relationships and employ some alternative research methods to more deeply explore the relationships among various factors, entry timing and performance.

**Disclosure statement**

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

**References**


