Family firms’ radicalness in entry mode choice: Evidence from Taiwanese companies’ FDI in China

Yi-Chieh CHANG
Assistant Professor, Department of Business Administration, St. John's University/ Taipei Campus, Taiwan

Anthony KUO*
Assistant Professor, Graduate Program of Business Management, Fu Jen Catholic University, Taiwan

Ming-Sung KAO
Assistant Professor, Department of International Trade and Finance, Fu Jen Catholic University, Taiwan

Chih-Fang CHIU
Doctoral student, Department of International Business, National Taiwan University, Taiwan

*The Corresponding Author:
Address : 510 Chung Cheng Road , Hsinchuang, Taipei County 24205, Taiwan
Email: 076667@mail.fju.edu.tw. or profakuo@gmail.com
Telephone: +886-2-2905-2968.
Fax: +886-2-2905-2753.
Family firms’ radicalness in entry mode choice: Evidence from Taiwanese companies’ FDI in China

Abstract

EMNCS are typically controlled by the founding families. To understand their international investment behavior, we have to investigate how family firms and non-family firms differ in their FDI decision making. Based on past studies revealing family firms’ characteristics of risk aversion and high desire to control, we posit that, when family firms undertake FDI in a host country with high uncertainty and large benefits of control, they behave more radically than non-family firms. We use a sample of 1600 publicly listed companies in Taiwan to examine family and non-family firms’ entry mode choice between joint ventures (JVs) and wholly owned subsidiaries (WOSs). We select China, an emerging country where uncertainty and the benefits of control are both high, as our research setting.

In an emerging country, fickle environmental conditions, such as fluid market and industry structure, create high levels of uncertainty and risks. To reduce risk (e.g. to share risks with their local partners), investing firms choose JVs as their entry mode. On the other hand, possible opportunistic behavior of local partners and high market potential also bring large benefits of control. If investing firms aim for the benefits of full ownership and control (e.g. to fully reap the return of their investment and control the strategic direction), they will choose wholly owned subsidiaries (WOSs). The entry mode choice actually depends on investing firms’ perception on uncertainty. If they perceive high uncertainty in the emerging country, they choose JVs as their entry mode. If they see low uncertainty, benefits for control will prevail, and WOSs will then be the better choice.

Compared with non-family firms, family firms are more risk averse and have higher desire to control. These characteristics, we hypothesize, will make it more likely for them to choose JVs than non-family firm when they perceive high uncertainty in the host country. But when family firms perceive low uncertainty, they have a higher propensity than non-family firms to choose WOSs as their entry mode. The empirical results support our hypotheses. The notion that family firms behave more radically than non-family firms when choosing their mode of entry into an emerging market has profound implications for the international business studies and for family business research as well.
1. Introduction

As multinational companies from emerging and developing economies (EMNCs) become increasingly active in the globalized world economy, studies on foreign direct investment (FDI) have been addressing more on the outward investment from emerging and developing economies. One of the main differences between EMNCs and multinational companies (MNCs) from developed economies is that EMNCs are typically controlled by founding families and their descendants, who still make key strategic decisions and take charge of operations long after the firm’s establishment (e.g. LaPorta, 1999; Claessen, 2000; Peng & Jiang, 2010; Yeh, 2001). For example, Claessen (2000) points out that, in nine countries in Southeast Asia, family businesses account for over half of the publicly listed companies. Yeh (2001) reports that family businesses account for 76% of all registered enterprises in Taiwan. Therefore, studying family firms’ FDI decision making will shed light on our understanding of outward investment from emerging and developing economies.

Family firms usually differ from non-family firms in their strategic decision-making, particularly in FDI decisions (Lien et al., 2005; Filatotchev et al., 2007; Luo and Tung, 2007; Strange et al., 2009). The main reason is that family members, usually the dominant shareholders of their companies, have their specific objectives (Young, Peng, Ahlstrom, Bruton & Yi, 2008; Lu, Xu & Liu, 2009). For family members, making economic profit may not be the only purpose to run a business—they establish and operate companies also to maintain socioemotional wealth, such as personal attachment, commitment, and identification with the firm (Anderson and Reeb, 2003; Habberson and William, 1999; Kets de Vries, 1993; Thomsen and Pedersen, 2000). When it comes to threats facing the socioemotional wealth, family firms are risk averse and desire to preserve family control of their company (Gomez-Mejia, Haynes, Nunez-Nickel, Jacobson and Moyano-Fuentes, 2007; Gomez-Mejia, Mariana and Martin, 2010). To understand family firms’ FDI decision making, we have to take both characteristics—risk aversion and high desire to control—into consideration.

Specifically, FDI in other emerging markets have provided an appropriate research setting to investigate the difference between family firms and non-family firms. Emerging economies are promising markets characterized with various uncertainties, such as economic upheavals or political shocks, in their environment. Risks of investment in...
emerging economies are thus remarkably high (e.g. Hoskisson et al., 2000). All firms, controlled by families or not, have to overcome the uncertainty so they can profit in the emerging markets, but family firms and non-family firms may behave differently when they encounter these uncertainties, and thus make different FDI decisions.

The current study endeavors to compare family firms’ entry mode choice, a key FDI decision, with that of non-family firms, so as to take one small step to better understanding outward investment from emerging economies. Using a sample of 1600 publicly listed companies in Taiwan, we examine family and non-family firms’ differences in their entry mode decision when entering China, an emerging market, while uncertain, with great potential.

In such a market, investing firms encounter market uncertainty resulting from fickle market conditions and institutional uncertainty stemming from underdeveloped legal system. To deal with risks associated with the uncertainty, firms choose joint ventures (JVs) as their entry mode to share risks with their local partners. However, risk reduction is not the only factor to consider when choosing the entry mode. If investing firms aim for the benefit of full ownership and control to prevent from potential opportunistic behavior of local partners and to fully exploit market potential, they will select wholly owned subsidiaries (WOSs). The choice between JVs and WOSs depends on investing firms’ perception on uncertainty. If these firms think uncertainty is high in the host country, they tend to choose JVs. However, if they see low uncertainty, benefits of control will prevail, and they will prefer WOSs.

Family firms’ characteristics of risk aversion and high desire to control, we posit, will make it more likely for them to choose JVs than non-family firm when they perceive high uncertainty in the host country. But when family firms perceive low uncertainty, they have a higher propensity than non-family firms to choose WOSs as their entry mode. In brief, we postulate that family firms behave more radically than non-family firms when they choose their mode of entry into an emerging country.

Our study contributes to practices and theories as well. First, our study finds that firms owned and controlled by families have their distinctive way of FDI decision making—they are more radical, in brief. No matter perceiving high or low uncertainty, they react more drastically than non-family firms. Whether radicalness is positive or negative for the firm’s performance is still not clear, but this distinctive characteristic of FDI decision-making
certainly have profound implications for family firms, non-family firms, and policy makers alike.

Second, to the research stream of family business, our analysis takes both risk preference and desire to control into consideration, providing a more comprehensive view on family business’ FDI decision making. Past research on family business has focused mainly on the risk factor, finding that family firms are more conservative (i.e. risk averse) (e.g. Filatotchev et al., 2007) in their FDI decision. Our study finds that high desire to control, in addition to risk aversion, has a significant effect on FDI decision as well.

Third, comparing family and non-family firms’ FDI decisions, we find that investing company’s corporate governance matters. Specifically, we find that investing firms’ ownership (family vs. non-family) has an impact on FDI decisions. The majority of past studies on FDI decisions, including entry mode choice and subsidiary ownership strategy, have focused on the influence of firm characteristics related to resources and capabilities of the investing company (e.g. firm size, R&D intensity), leaving corporate governance variables mostly untapped (except for a few studies such as Filatotchev et al., 2007). Our study reveals that firms controlled by family owners do make different FDI decisions from firms controlled by other types of owners. This finding may have important implications for international business studies.

In the following sections, we will first review past literature and develop hypothesis. Then we will describe the sample and our methodology, followed by research findings, discussion, and conclusion.

2. Literature review and hypothesis development

2.1. Choosing the mode of entry to emerging economies: to reduce risk or to control

Emerging economies are promising markets accompanied with various uncertainties. To deal with risks associated with the uncertainty, firms tend to choose joint ventures (JVs) as their entry mode to share risks with their local partners. However, risk reduction is not the only aspect to consider when firms choose their entry mode. If investing firms aim for the market potential and benefits of control, such as the full stake of profit from the subsidiary and autonomy in strategic direction, they will select wholly owned subsidiaries
(WOSs) to fully control their foreign operations. Hence, this decision of entry mode choice is actually a trade-off between risk considerations and control considerations. Whether to choose JVs or WOSs depends on investing firms’ perception on uncertainty. If they perceive high uncertainty in the host country, they tend to choose JVs. However, if they see low uncertainty, they will are prone to choose WOSs. We elaborate more details of the risk considerations and control considerations below.

2.1.1. The risk considerations

Uncertainty of investing in emerging economies are very high, because in emerging countries, economic and market conditions are changeable, and institutional environment is often incomplete (Hennart, 1994; Oliver, 1997). Frequent changes in the economic conditions, such as volatile exchange rate and monetary policies, make it hard for managers to predict the future and make business judgement (Miles and Schreyer, 2009; Friedman, 1977, Grier, Olekalns, Shields and Henry, 2004; Grier and Grier, 2006). Together with relentlessly arising new players in the market, from inside or outside the country, the market condition and industry structure in emerging economies appear to be tremendously fluid (Luo, 2002; Luo & Tung, 2007 ), creating unparalleled uncertainty for firms operating in these countries (Hoskisson et al., 2000).

On the other hand, emerging economies, also known as transition economies, are often undergoing the transition process, featuring the altering and creating of institutions. Compared with developed countries, institutional systems in emerging countries are often underdeveloped (Hoskisson et al., 2000). The incompleteness of institutional framework is usually characterized with political instability, capricious policies, ambiguous regulation, corruption, anarchy, or terrorism, discouraging MNCs to invest (Peng & Heath, 1996; Hoskisson et al., 2000) and posting considerable uncertainty for MNCs once they have decided to invest (Nelson, Tilly and Walker, 1998; Choi, Lee and Kim, 1999; La Porta, Lopez-de-Silanes, Shleifer and Vishny, 1997). For example, it is extremely risky to invest in countries with rampant terrorism, because terrorists can easily destroy the plants MNCs established there.

When encountering high uncertainty, firms usually reduce their investment to avoid losses (Carruth, Dikerson and Henley, 2000). The same logic also applies to FDI. When uncertainty in a host country is high, MNCs tend to lower their resource commitment (Rob and Vettas, 2003; Bowman, 1993). Thus, when entering an emerging market, where
uncertainty is high, MNCs choose JVs as their entry mode to reduce risk. Forming a joint venture with a local partner allows MNCs to lower resource commitment to that specific country and share risks with the local partner (Kim & Hwang, 1992). Meanwhile, the local partner can also provide knowledge on the local market to help mitigate uncertainty (Gatignon & Anderson, 1988).

The real options perspective sees equity joint venture as a real option, arguing that firms can seize the upside potential of a JV by buying out the partner in a later stage when the JV is well-established and prosperous (Kim and Huang, 1992; Lee, 2004; Kale and Puranam, 2004), or by gradually increasing ownership stakes to grasp more returns from the JV (Kogut. 1991; McGrath, 1997; Ruvoli and Salorio, 1996; Folta and Miller, 2002; Fisch, 2008). Through the JV arrangement, firms can increase their flexibility and limit the downside risk. Empirical supports for the risk reduction rationale can be found in past studies. For example, Brouthers & Brouthers (2003) shows that MNCs in the manufacturing industry preferred JVs to WOSs when entering Central and Eastern European markets, where uncertainty is high.

Sharing the equity ownership with local partners facilitates MNCs to reduce their risk when entering an emerging market, yet the JV choice is subject to partners’ potential opportunistic behavior. Even if local partners do not behave opportunistically, sharing the equity ownership of the subsidiary may forgo a significant portion of returns from the booming market. Thus, investing firms choose WOSs, instead of JVs, to seek benefits of control and full ownership of the subsidiary.

2.1.2. The control considerations

When working with partners, the potential opportunistic behavior has always been a concern. But in emerging economies, this issue becomes particularly severe. The main reason is that institutional systems in emerging countries are often underdeveloped, making it insufficient to protect the welfare of foreign investors. Hence, the need to control is especially high in emerging economies.

For example, poor enforceability of legal agreements increases the cost of contracting and MNCs’ needs to control. Roy & Oliver(2009) found that quality of host country’s legal environment—characterized by rule of law and control of corruption— influence MNCs’ concerns on collaboration activities and partner selection criteria in the host country. Their
study has specifically identified managers’ worries about their firm’s ability to capture economic rents generated by their international joint venture activities, as well as the future costs of interacting with their partners when they perceived that “the host country’s institutional environment would fail to provide an adequate safeguard against arbitrary rulings in individual cases, and that this environment would not serve to effectively apprehend and punish those who commit crimes” (Roy & Oliver; 2009: pp.795). Such incomplete legal enforceability makes managers of MNCs hesitate to collaborate and tend to choose WOSs, the full control solution, as their mode of entry.

On the bright side, emerging economies are undergoing the process of rapid industrialization and high economic growth, providing enormous business opportunities for domestic as well as foreign firms to profit (Hoskisson et al., 2000). Investing in such countries increases the potential for future growth. If MNCs enter an emerging country via JV, the joint equity arrangement, they have to share profit of the JV with their local partners. But if the MNCs are confident that they can manage the uncertainty without a local partner, they tend to enter the country via WOSs (Chang, 1995; Chang & Rosenzweig, 2001), so they can appropriate the profit generated by the foreign subsidiary, without the need to share. In addition, the WOS arrangement also allows MNCs to fully control the strategic direction of the subsidiary to meet their corporate objectives.

To choose between JVs and WOSs actually depends on how high the environmental uncertainty is. If the uncertainty is high, investing firms will choose JVs to reduce risk. But if the uncertain is low, they will choose WOSs for the benefits of control.

2.1.3. Perceived uncertainty

However, perceived uncertainty may not always be equivalent to actual uncertainty (Duncan, 1972; Lorenzi, Slim and Slocum, 1981). Milliken (1987) pointed out that organizations, by means of learning, can improve their capability of assessing the environmental changes and better predict future status of the environment. When managers in an organization can foresee the future more accurately, they have better ideas of how to react and hence perceive lower uncertainty in the environment. Bowman and Hurry (1993) found that organizations not only passively perceive uncertainty in their environment but also actively endeavor to control their environment, so they can reduce the impact of uncertainty.
In FDI studies, similar results can also be found. Anderson and Gatignon (1986) and Fisch (2008) found that international experience help mitigate uncertainty and risks, arguing that MNCs with more international experience perceive lower uncertainty and risks than MNCs with less international experience. Kim, Hwang and Burgers (1993), setting out from the perspective of diversification, elaborated that more internationally diversified MNCs perceived lower environmental risks in a specific country, because failure in one single host country does not create substantial impacts for them. In addition, geographically proximity also attenuates uncertainty and risks associated. When entering a neighboring country, usually with similar culture, MNCs can more easily build up tighter network relationships (Rauch and Trindade, 2002; Gao, 2003) and enjoy lower risks of communications failure (Filatotchev et al., 2007). In short, if uncertainty can be effectively managed, it will no longer be an issue, and firms will then perceive low uncertainty.

Therefore, uncertainty is a relative concept. Facing the same environmental condition, different firms may perceive different uncertainty. It is actually MNCs’ perceived uncertainty that determines their entry mode choice when they enter an emerging market. When MNCs perceive high uncertainty, they tend to choose JVs to reduce risk. But when they perceive low uncertainty in the emerging market, they will turn to WOSs for the benefit of control.

2.2. Family firms’ characteristics and their impacts on entry mode decision

Family firms usually behave differently from non-family firms in their strategic decision-making. Past studies on family business have identified two prominent characteristics of family firms: (1) risk aversion; and (2) high desire to control. Compared with non-family firms, family firms appear to be more risk adverse and have a higher desire to control (Gomez-Mejia, Haynes, Nunez-Nickel, Jacobson and Moyano-Fuentes, 2007; Gomez-Mejia, Mariana and Martin, 2010). These characteristics of family firms will reflect in their entry mode choice when they enter an emerging country. Below we elaborate details on the two characteristics, and their impacts on family firms’ entry mode choice.

2.2.1. Risk aversion

Family firms are controlled by family members who possess the majority of the firm’s shares. Family members usually have their specific objectives—they establish and operate companies not only to make profit but also to maintain socioemotional wealth. For family
members, their firm provides, in addition to economic benefits, socioemotional functions such as personal attachment, commitment, and identification with the firm (Anderson and Reeb, 2003; Habberson and William, 1999; Kets de Vries, 1993; Thomsen and Pedersen, 2000).

For the reason of socioemotional wealth, family owners consider their firm the family’s patrimony (Hollander 1983; Miller and Rice 1967), or a mechanism to provide employment and financial security for their family (Liebowittz, 1986). Hence, they attempt to preserve their firm’s “familiness” by recruiting family members and relatives (Bruton et al., 2003) or handing over their businesses to their offspring (Beckhard & Dyer, 1983). Those endeavors exclude non-family members from entering the company or purchasing the firms’ shares. Consequently, managers in family firms are suffering from lacking diversity, often making them less responsive to environmental changes (Liebowittz, 1986). Previous studies have also suggested that family equity holdings are usually more concentrated, resulting in a relative lack of financial portfolio diversification and limited liquidity (Anderson and Reeb, 2004). Hence, they are less tolerable to risks. When encountering uncertainty, family businesses appear to be more conservative and risk averse than non-family firms (Chatterjee, Lubatkin, and Schulze 1999; Wiseman and Gomez-Mejia, 1998; Anderson and Reeb, 2004).

Family firms’ characteristic of risk aversion reflects in their prudence in resource commitment. For example, they are less likely than non-family firms to invest in research and development (R&D) and innovation (Jensen and Meckling, 1976). The same tendency can also be found in family firms’ FDI decision. Filatotchev et al. (2007) found that family firms, compared with non-family firms, tend to avoid resource commitment and hold lower equity stake in their overseas affiliates when they undertake FDI activities.

The phenomenon that family firms are more risk averse than non-family firms may also be reflected in the two types of firms’ entry mode choices. As elaborated earlier, when perceiving high uncertainty in an emerging country, firms tend to choose JVs to reduce risk. But, due to the fact that family firms are more risk averse than non-family firms, family firms may be even more likely than non-family firms to choose JV. Hence, we predict that:

**Hypothesis 1:** When perceiving high uncertainty, family firms have a higher propensity than non-family firms to choose joint ventures (JVs) as their mode of entry to an emerging country.
2.2.2. High desire to control

Risk aversion is not the only prominent characteristic of family ownership. Family firms are also found to exhibit higher desire for controlling their business than non-family firms (Gomez-Mejia et al., 2007; Gomez-Mejia, et al., 2010). As mentioned earlier, family owners typically consider their firm the family’s patrimony and make efforts to exclude non-family member from entering the firm to preserve the firm’s “familiness” and maintain the socioemotional wealth of the family.

This socioemotional motive also reflects in family firms’ frequent use of “pyramidal ownership structures” (e.g. LaPorta, 1999; Claessen, 2000) (in which firm A owns the majority share of firms B, firm B owns the majority share of firm C, and so on) and “cross holding” (in which firm A owns equity in firm B and at the same time firm B holds equity in firm A) amongst firms in a business group (e.g. Peng & Jiang, 2010). Family firms utilize these practices to exercise their control over a group of firms through a chain of ownership relations (Gomez-Mejia, Haynes, Nunez-Nickel, Jacobson and Moyano-Fuentes, 2007; Gomez-Mejia, Makri and Kintana, 2010).

For family firms, successive layers of firms in the pyramid or cross-holding structure are part of their overall asset portfolio, even these firms are in foreign countries. When undertaking FDI activities, family firms also consider their foreign subsidiary a way to reach out for global coverage. Being the ultimate owners located at the apex of the ownership relations enable family firms to allocate and distribute resources available from these successive layers of firms to fulfill their family objective.

For this reason, practices such as tunneling (the transfer of assets and profits out of firms for the benefits of those who control them) are widespread in family business groups (Bae et al, 2002; Bertrand et al., 2002). Once outside shareholders buy out a majority of shares of a family owned and controlled firm, the firm’s familiness will be highly attenuated, and the controlling family will no longer be able to dominate the firms’ strategy to meet their family needs. Hence, family owners incline to maintain a high equity stake in their affiliates (Gomez-Mejia et al., 2010).

In short, family businesses, compared with non-family firms, usually exhibit higher desire to control, especially via equity ownership. Their characteristic of higher desire to
control may also exhibit in their mode of entry into an emerging country. As discussed earlier, when perceiving low uncertainty in an emerging country, firms tend to choose WOSs for the benefits of control. Since family firms have a higher desire to control than non-family firms, when perceiving low uncertainty in an emerging country, they will, we posit, be more willing than non-family firms to choose WOSs to enjoy benefits of control. Hence, we predict that:

**Hypothesis 2:** When perceiving low uncertainty, family firms have a higher propensity than non-family firms to choose wholly owned subsidiaries (WOSs) as their mode of entry to an emerging country.

**Figure 1** elaborates the detailed relationships of perceived uncertainty and family firms/non-family firms’ entry mode choices.

![Figure 1](image)

**Figure 1.** The relationship of perceived uncertainty and family firms/non-family firms’ entry mode choices

### 3. Methodology

3.1. Data and sample

We analyze Taiwanese firms’ investments in China from 1996 to 2006. Financial data and information were taken from the Taiwan Economic Journal (TEJ) database and then
triangulated with data from annual reports and the Market Observation Post System of Taiwan Stock Exchange to ensure data reliability. After dropping observations with missing data, our final sample consists of 1600 observed investments of overseas investments from publicly listed electronic companies in Taiwan. Locations of the investments include Jiangsu, Shanghai, Shenzhen, Dongguan, and so on (Table 1 shows the details). The number of investments in Jiangsu is the highest—460 investments in total, accounting for 28.75% of our sample. The second highest is Shanghai—319 investments in total, accounting for 19.94% of our sample. The third highest is Shenzhen—181 investments in total, accounting for 11.31% of the total. The fourth highest is Dongguan—167 investments in total, accounting for 10.44% of the total. The fifth highest is Beijing—86 investments in total, accounting for 5.38% of our sample. The remaining investments in the sample and overall sample distribution by location are listed in Table 1 below.

Table 1. Sample distribution by location.

<table>
<thead>
<tr>
<th>Location</th>
<th>Number</th>
<th>Percentage(%)</th>
<th>Location</th>
<th>Number</th>
<th>Percentage(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jiangsu</td>
<td>460</td>
<td>28.75</td>
<td>Zhuhai</td>
<td>9</td>
<td>0.56</td>
</tr>
<tr>
<td>Shanghai</td>
<td>319</td>
<td>19.94</td>
<td>Shandong</td>
<td>8</td>
<td>0.50</td>
</tr>
<tr>
<td>Shenzhen</td>
<td>181</td>
<td>11.31</td>
<td>Fuzhou</td>
<td>8</td>
<td>0.50</td>
</tr>
<tr>
<td>Dongguan</td>
<td>167</td>
<td>10.44</td>
<td>Chongqing</td>
<td>6</td>
<td>0.38</td>
</tr>
<tr>
<td>Beijing</td>
<td>86</td>
<td>5.38</td>
<td>Hunan</td>
<td>6</td>
<td>0.38</td>
</tr>
<tr>
<td>Guangzhou</td>
<td>49</td>
<td>3.06</td>
<td>Shanxi</td>
<td>5</td>
<td>0.31</td>
</tr>
<tr>
<td>Guangdong</td>
<td>48</td>
<td>3.00</td>
<td>Henan</td>
<td>5</td>
<td>0.31</td>
</tr>
<tr>
<td>Zhejiang</td>
<td>45</td>
<td>2.81</td>
<td>Shenyang</td>
<td>5</td>
<td>0.31</td>
</tr>
<tr>
<td>Nanjing</td>
<td>25</td>
<td>1.56</td>
<td>Dalian</td>
<td>4</td>
<td>0.25</td>
</tr>
<tr>
<td>Ningbo</td>
<td>24</td>
<td>1.50</td>
<td>Xinjiang</td>
<td>4</td>
<td>0.25</td>
</tr>
<tr>
<td>Xiamen</td>
<td>23</td>
<td>1.44</td>
<td>Liaoning</td>
<td>4</td>
<td>0.25</td>
</tr>
<tr>
<td>Tianjin</td>
<td>21</td>
<td>1.31</td>
<td>Qingdao</td>
<td>3</td>
<td>0.19</td>
</tr>
<tr>
<td>Fujian</td>
<td>18</td>
<td>1.13</td>
<td>Jilin</td>
<td>2</td>
<td>0.13</td>
</tr>
<tr>
<td>Sichuan</td>
<td>15</td>
<td>0.94</td>
<td>Anhui</td>
<td>2</td>
<td>0.13</td>
</tr>
<tr>
<td>Hubei</td>
<td>13</td>
<td>0.81</td>
<td>Guangxi</td>
<td>2</td>
<td>0.13</td>
</tr>
<tr>
<td>Shaanxi</td>
<td>11</td>
<td>0.69</td>
<td>Hong Kong</td>
<td>2</td>
<td>0.13</td>
</tr>
<tr>
<td>Jiangxi</td>
<td>10</td>
<td>0.63</td>
<td>Hebei</td>
<td>1</td>
<td>0.06</td>
</tr>
<tr>
<td>Wuhan</td>
<td>9</td>
<td>0.56</td>
<td>Total</td>
<td>1600</td>
<td>100.00</td>
</tr>
</tbody>
</table>

We further analyzed the distribution of these Taiwanese electronic companies’ investments, and examined whether entry mode choice are affected by locations. We found
that total number of JV entries is 542, accounting for 33.87% of the whole, and total number of WOS entries is 1058, accounting for 66.13% of the sample set. We did a Chi-square test to examine the relationship between entry mode choice and location. The $\chi^2$ value of 74.301 ($P<0.001$) indicates a high correlation between entry mode choice and location.

Table 2. Relationships between entry mode choice and locations.

<table>
<thead>
<tr>
<th>Location</th>
<th>Jiangsu</th>
<th>Shanghai</th>
<th>Shenzhen</th>
<th>Dongguan</th>
<th>Beijing</th>
<th>Guangzhou</th>
<th>Guangdong</th>
<th>Zhejiang</th>
<th>Nanjing</th>
<th>Ningbo</th>
<th>Xiamen</th>
<th>Tianjin</th>
<th>Other</th>
<th>Sub-total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry mode</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample number</td>
<td>138</td>
<td>85</td>
<td>45</td>
<td>52</td>
<td>42</td>
<td>25</td>
<td>22</td>
<td>21</td>
<td>4</td>
<td>6</td>
<td>10</td>
<td>9</td>
<td>83</td>
<td>542</td>
</tr>
<tr>
<td>%</td>
<td>30</td>
<td>26.65</td>
<td>24.86</td>
<td>31.14</td>
<td>48.84</td>
<td>51.02</td>
<td>45.83</td>
<td>46.67</td>
<td>16</td>
<td>25</td>
<td>43.48</td>
<td>42.86</td>
<td>54.61</td>
<td>33.87</td>
</tr>
<tr>
<td>WOS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample number</td>
<td>322</td>
<td>234</td>
<td>136</td>
<td>115</td>
<td>44</td>
<td>24</td>
<td>26</td>
<td>24</td>
<td>21</td>
<td>18</td>
<td>13</td>
<td>12</td>
<td>69</td>
<td>1058</td>
</tr>
<tr>
<td>%</td>
<td>70</td>
<td>73.35</td>
<td>75.14</td>
<td>68.86</td>
<td>51.16</td>
<td>48.98</td>
<td>54.17</td>
<td>53.33</td>
<td>84</td>
<td>75</td>
<td>56.52</td>
<td>57.14</td>
<td>45.39</td>
<td>66.13</td>
</tr>
<tr>
<td>Total</td>
<td>460</td>
<td>319</td>
<td>181</td>
<td>167</td>
<td>86</td>
<td>49</td>
<td>48</td>
<td>45</td>
<td>25</td>
<td>24</td>
<td>23</td>
<td>21</td>
<td>152</td>
<td>1600</td>
</tr>
<tr>
<td>Chi-Square</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>74.301****</td>
</tr>
</tbody>
</table>

Note: **** indicates that $p<0.001$. Locations with less than twenty observations are combined into the category of "other".

3.2. Variables and measurements

3.2.1. Dependent variable

**Entry mode.** Our dependent variable is *entry mode*. A wholly owned subsidiary (WOS) is defined as a subsidiary with 95% or higher percentage of shares owned by the parent (investing) company from Taiwan. A subsidiary with less than 95% of its shares owned by the Taiwanese parent company is then defined as a joint venture (JV). A dummy variable is created, taking the value of 1 to represent WOSs and the value of 0 to represent JVs. We then use binary logistics regression to analyze various factors’ influences on *entry mode*.

3.2.2. Independent variables

**Family firm.** This variable measures the family ownership of the parent (investing) firm.
We follow the strict definition provided by the TEJ database to define family firms as firms in which at least 50% of the members on the board are family members. This definition ensures that family members have overwhelming voting rights so they fully control the firm and make key decisions. We create a dummy variable that takes the value of 1 to represent family firms and takes the values of 0 to represent non-family firms.

**Perceived uncertainty.** We follow earlier studies to construct our measures of perceived uncertainty. Two commonly used measures have been selected as the proxy variables: (1) international experience, and (2) geographic proximity. The former measures firm specific aspects of perceived uncertainty, and the latter measures environmental aspects of perceived uncertainty.

The first measure, international experience, has been widely used in previous research. For example, Anderson and Gatignon (1986) and Fisch (2008) found that international experience mitigates uncertainty and can serve as the proxy for perceived uncertainty. MNCs with rich international experience perceive low uncertainty, and MNCs with little international experience perceive high uncertainty. We calculate an investing firm’s international experience when they are undertaking the observed investment by counting the number of host countries the firm has already invested in (the reference time is one year before the observed investment). A greater number represents richer international experience and lower perceived uncertainty.

To compare different observations’ degree of international experience, we set the average international experience of the total 1600 observed investments as the reference point. Observed investments with international experience lower than the average are viewed as “low international experience”. In contrary, observations with international experience higher than the average are viewed as “high international experience”. For better readability for further analysis, we create two dummy variables for low international experience and high international experience respectively. The dummy variable low international experience takes the value of 1 to represent low international experience and consequently high perceived uncertainty. Similarly, the dummy value high international experience takes the value of 1 to represent high international experience and consequently low perceived uncertainty.

The second measure, geographic proximity, is also frequently found in earlier studies. Geographic proximity attenuates uncertainty and risks associated. When entering a
neighboring country, usually with similar culture and custom, MNCs can build up tighter network relationships more easily (Rauch and Trindade, 2002; Gao, 2003) and the risks of communication failure will be lower as well (Filatotchev et al., 2007).

We select two specific regions in China—the Greater Shanghai region and the North and Northwest region—to test the influence of geographic proximity on entry mode choice. The two regions represent geographically proximate locations and geographically distant locations respectively. Taiwan, located in the southeast of China, is close to the Greater Shanghai region (located in the middle-east of China) and far away from the North and Northwest region. Thus, Taiwanese companies are generally more familiar and have better connections with the Greater Shanghai region than the North and Northwest region. Consequently, perceived uncertainty will be lower when they invest in the Greater Shanghai region, and higher when they invest in the North and Northwest region.

We put Jiangsu and Shanghai together into the Greater Shanghai region, and create a dummy variable which takes the value of 1 to represent the Greater Shanghai region and the values of 0 to represent other regions. We further group Tianjin, Shandong, Shanxi, Shenyang, Liaoning, Dalian, Qingdao, Jilin, Hebei, Sichuan, Chongqing, Shaanxi, and Xinjiang into the North and Northwest region. Then we create a dummy variable which takes the value of 1 to represent the North and Northwest region and the values of 0 to represent other regions.

3.2.3. Control variables

*Investment size.* Investment size is defined as the monetary amount of the investment, coded by taking the log value, to measure how large or small the observed investment is. Large investments usually require significant resource commitment from the parent firm and thus affect its entry mode choice. We therefore include this variable in our analyses to control for possible effects of the size of investment on entry mode choice.

*Parent firm size.* Parent firm size is defined as the contributed capital of the firm, coded by taking the log value. Larger firms usually have abundant resources and better management capabilities, and thus have lower needs for resources provided by local partners when entering a foreign country. We therefore control for possible effects of parent firm size on entry mode choice.

*R&D intensity.* R&D intensity is calculated as the ratio of the firm's R&D expenditure to
its revenue. Companies with high R&D intensity tend to choose wholly owned subsidiaries as their entry mode (e.g. Demirbag, Glaister & Tatoglu, 2007). So we include this variable to control for its possible effects on entry mode choice.

*Debt ratio.* Debt ratio is calculated by dividing total debt by total assets. A company’s debt ratio reflects its degree of financial leverage, and signals its current status of riskiness. Li & Meyer (2009) finds that debt ratio is an influential factor to a firm’s entry mode. In their study, companies with high debt ratio are found to prefer joint venture as their mode of entry to a foreign country. For this reason, we include debt ratio as one of our control variables.

*Industry.* We created dummy variables to represent which industry a firm is in. Industry categories include semiconductor, computers and peripherals, photonics, telecommunications, electronic components, electronics distribution, and information services.

### 4. Results

In the following sections, we first describe the correlations and then report results of the binary logistics regression and different factors’ effects on entry mode choice.

4.1. Descriptive statistics and correlations.

Table 3 reports the means, standard deviations, and correlations matrix for the variables. The interaction term of *family firm* and *international experience* is positively related to *entry mode* (correlation coefficient is 0.083; p < 0.0001), indicating that family business’ perception of low uncertainty (high *international experience*) is positively related to the choice of WOS. Meanwhile, the interaction term of *family firm* and *international experience* is negatively related to *entry mode* (correlation coefficient is -0.085; p < 0.0001), indicating that family business’ perception of high uncertainty (low *international experience*) is positively related to the choice of JV. Similar relationships can also be found in *geographic proximity*, another proxy variable for perceived uncertainty.
### Table 3. Means, standard deviations, and correlations.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>S.D.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Entry mode</td>
<td>0.661</td>
<td>0.473</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Family firm</td>
<td>0.481</td>
<td>0.500</td>
<td>-0.007</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 High international experience</td>
<td>0.374</td>
<td>0.484</td>
<td>0.067</td>
<td>***</td>
<td>0.164</td>
<td>****</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Low international experience</td>
<td>0.626</td>
<td>0.484</td>
<td>-0.067</td>
<td>***</td>
<td>-0.164</td>
<td>****</td>
<td>-1.000</td>
<td>****</td>
<td>1.000</td>
</tr>
<tr>
<td>5 Greater Shanghai</td>
<td>0.487</td>
<td>0.500</td>
<td>0.108</td>
<td>****</td>
<td>-0.081</td>
<td>***</td>
<td>-0.016</td>
<td>0.016</td>
<td>1.000</td>
</tr>
<tr>
<td>6 North and Northwest</td>
<td>0.056</td>
<td>0.229</td>
<td>-0.120</td>
<td>****</td>
<td>0.078</td>
<td>***</td>
<td>-0.024</td>
<td>0.024</td>
<td>-0.236</td>
</tr>
<tr>
<td>7 Family firm × High international experience</td>
<td>0.219</td>
<td>0.414</td>
<td>0.083</td>
<td>****</td>
<td>0.551</td>
<td>****</td>
<td>0.686</td>
<td>****</td>
<td>-0.686</td>
</tr>
<tr>
<td>8 Family firm × Low international experience</td>
<td>0.261</td>
<td>0.439</td>
<td>-0.085</td>
<td>****</td>
<td>0.618</td>
<td>****</td>
<td>-0.459</td>
<td>****</td>
<td>0.459</td>
</tr>
<tr>
<td>9 Family firm × Greater Shanghai</td>
<td>0.214</td>
<td>0.410</td>
<td>0.109</td>
<td>****</td>
<td>0.542</td>
<td>****</td>
<td>0.082</td>
<td>****</td>
<td>-0.082</td>
</tr>
<tr>
<td>10 Family firm × North and Northwest</td>
<td>0.036</td>
<td>0.185</td>
<td>-0.133</td>
<td>****</td>
<td>0.200</td>
<td>****</td>
<td>-0.009</td>
<td>0.009</td>
<td>-0.187</td>
</tr>
<tr>
<td>11 Investment size</td>
<td>10.750</td>
<td>1.516</td>
<td>-0.096</td>
<td>****</td>
<td>0.080</td>
<td>**</td>
<td>0.107</td>
<td>****</td>
<td>-0.107</td>
</tr>
<tr>
<td>12 Parent firms size</td>
<td>14.569</td>
<td>1.460</td>
<td>-0.038</td>
<td>****</td>
<td>0.283</td>
<td>****</td>
<td>0.407</td>
<td>****</td>
<td>-0.407</td>
</tr>
<tr>
<td>13 R&amp;D intensity</td>
<td>3.242</td>
<td>4.291</td>
<td>0.060</td>
<td>**</td>
<td>-0.141</td>
<td>****</td>
<td>0.010</td>
<td>****</td>
<td>-0.010</td>
</tr>
<tr>
<td>14 Debt ratio</td>
<td>78.473</td>
<td>75.449</td>
<td>-0.062</td>
<td>**</td>
<td>-0.001</td>
<td>-0.043</td>
<td>*</td>
<td>0.043</td>
<td>*</td>
</tr>
</tbody>
</table>

N=1600,  * p<0.1,  ** p<0.05,  *** p<0.01,  **** p<0.001
Table 3. Means, standard deviations, and correlations (continued).

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>S.D.</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family firm × Greater Shanghai</td>
<td>0.214</td>
<td>0.410</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family firm × North and Northwest</td>
<td>0.036</td>
<td>0.185</td>
<td>-0.100</td>
<td>****</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Investment size</td>
<td>10.750</td>
<td>1.516</td>
<td>0.066</td>
<td>***</td>
<td>-0.033</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent firms size</td>
<td>14.569</td>
<td>1.460</td>
<td>0.197</td>
<td>****</td>
<td>0.090</td>
<td>****</td>
<td>0.354</td>
<td>****</td>
</tr>
<tr>
<td>R&amp;D intensity</td>
<td>3.242</td>
<td>4.291</td>
<td>-0.086</td>
<td>****</td>
<td>-0.040</td>
<td>-0.171</td>
<td>****</td>
<td>-0.125</td>
</tr>
<tr>
<td>Debt ratio</td>
<td>78.473</td>
<td>75.449</td>
<td>-0.022</td>
<td>-0.062</td>
<td>**</td>
<td>0.096</td>
<td>****</td>
<td>0.029</td>
</tr>
</tbody>
</table>

N=1600,  * p<0.1,  ** p<0.05,  *** p<0.01,  **** p<0.001
4.2. The influence of international experience on entry mode choice

Using binary logistics regression, we further analyze the influence of the two proxy variables for perceived uncertainty—international experience and geographic proximity—on entry mode. The results are shown in Table 4 and Table 5.

Table 4 reveals the results of using international experience as a proxy for perceived uncertainty. Model 1 tested the entry mode preference of family firms when they have high international experience (i.e. perceive low uncertainty). The LR $\chi^2$ value of Model 1 is 65.147 ($p<0.001$), indicating high explanatory power of the model. Coefficient of the interaction term of family firm and high international experience in Model 1 is 0.262 ($p<0.01$), showing a positive impact on entry mode (i.e. more likely to choose WOS). The result confirms that, when family firms perceive low uncertainty, they have a higher tendency than non-family firms to choose WOS as their entry mode. Hypothesis 2 is thus supported.

Model 2 tested the entry mode preference of family firms when they have low international experience (i.e. perceive high uncertainty). The LR $\chi^2$ value of Model 2 is 60.872 ($p<0.001$), indicating high explanatory power of the model. Coefficient of the interaction term of family firm and low international experience in Model 2 is -0.131 ($p<0.1$), revealing a negative effect on entry mode (i.e. more likely to choose JV). The result confirmed that, when family firms perceive high uncertainty, they are more likely than non-family firms to choose JV as their entry mode. Hypothesis 1 is thus supported.

Model 3 takes both high international experience and low international experience into consideration. LR $\chi^2$ value of Model 3 is 68.366 ($p<0.001$), indicating high explanatory power of the model. Coefficients of the two interaction terms—Family firm $\times$ High international experience and Family firm $\times$ Low international experience—are 0.251 ($p <0.01$) and -0.123 ($p <0.1$) respectively, showing a consistency with Model 1 and Model 2, and thus support both Hypothesis 1 and Hypothesis 2.

Analyses on the control variables show that investment size negatively impacts on entry mode. The result indicates that when the scale of international investment is large, Taiwanese firms tend to choose JV as their mode of entry to China. The reason is likely to be the risk-reduction motives—larger investments are risky, and collaborating with a local partner may help share the risk and bring in more resources. In addition, debt ratio also has a negative effect on entry mode, showing that firms with higher financial leverage tend to
choose JV, the entry mode which helps reduce risks. The reason may be that, we speculate, firms with high financial leverage have already been in the position of high risks and thus are more cautious on risks. When choosing their mode of entry, risk considerations usually dominate, driving them to opt for JV to spread risks.

Further more, the result also shows that firms from the photonics industry and from the information services industry tend to choose JV as their entry mode to China. We attribute the reason to the distribution of global supply chain in the photonics industry and unique industry characteristics of the information services industry. The photonics industry is highly fragmented with numerous participants. Among them Chinese firms are playing an ever important role in manufacturing. It is very likely that Taiwan photonics firms aim to leverage Chinese photonics manufacturers’ abundant production capacities, and thus choose to form JVs with them. Meanwhile, clients’ needs in the information services industry are highly idiosyncratic, and participating firms have to compete on customization their offering to meet their clients’ specific needs. Therefore, firms from this industry tend to invite local partners to establish joint ventures, so as to leverage their knowledge on local clients’ needs. Of course, more detailed studies are needed to further verify these postulations.

Table 4. The influence of international experience on entry mode choice

<table>
<thead>
<tr>
<th>International experience</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficient</td>
<td>χ²</td>
<td>Coefficient</td>
<td>χ²</td>
</tr>
<tr>
<td>Constant</td>
<td>3.260****</td>
<td>17.369</td>
<td>2.510***</td>
</tr>
<tr>
<td>Family firm × High international experience</td>
<td>0.262***</td>
<td>7.787</td>
<td></td>
</tr>
<tr>
<td>Family firm × Low international experience</td>
<td></td>
<td>-0.131*</td>
<td>3.509</td>
</tr>
<tr>
<td>High international experience</td>
<td>0.066</td>
<td>0.708</td>
<td></td>
</tr>
<tr>
<td>Low international experience</td>
<td></td>
<td></td>
<td>-0.141**</td>
</tr>
<tr>
<td>International experience</td>
<td></td>
<td></td>
<td>0.009</td>
</tr>
</tbody>
</table>
Investment size  -0.103***  6.888  -0.108***  7.601  -0.106***  7.221
Parent firm size  -0.113**  5.993  -0.078*  2.872  -0.103**  4.597
R&D intensity  0.016  1.033  0.012  0.576  0.013  0.758
Debt ratio  -0.001*  3.365  -0.001*  3.406  -0.001*  3.395
Semiconductor industry  0.231  2.465  0.212  2.074  0.229  2.406
Computers and peripherals industry  -0.080  0.780  -0.104  1.314  -0.097  1.083
Photonics industry  -0.182*  3.003  -0.198*  3.573  -0.179*  2.898
Telecom industry  0.029  0.051  -0.006  0.002  0.021  0.028
Electronic components industry  -0.111  1.381  -0.113  1.444  -0.102  1.153
Electronics distribution industry  0.059  0.177  0.029  0.041  0.045  0.100
Information services industry  -0.507****  11.464  -0.525****  12.246  -0.517****  11.868

Observations  1600  1600  1600
Pseudo-R2  0.040  0.037  0.042
Model $\chi^2$  65.147****  60.872****  68.366****

*p < 0.1, **p < 0.05, *** p < 0.01, **** p < 0.001

4.3. The influence of geographic proximity on entry mode choice

Table 5 reveals the results of using geographic proximity as a proxy for perceived uncertainty. Model 4 tested the entry mode preference of family firms when they invest in a nearby location (i.e. perceive low uncertainty). In the table, the LR $\chi^2$ value of Model 4 is 85.371 (p<0.001), indicating high explanatory power of the model. The coefficient of the interaction term of family firm and Greater Shanghai in Model 4 is 0.251 (p<0.01), showing a positive effect on entry mode (i.e. more likely to choose WOS). The result confirms that, when family firms perceive low uncertainty (i.e. invest in a nearby location), they have a higher propensity than non-family firms to choose WOS as their entry mode. Hypothesis 2 is thus supported.

Model 5 tested the entry mode preference of family firms when they invest in a distant region (i.e. perceive high uncertainty). The LR $\chi^2$ value of Model 5 is 83.603 (p<0.001),
indicating high explanatory power of the model. The coefficient of the interaction term of family firm and North and Northwest in Model 5 is -0.555 (p<0.05), revealing a negative effect on entry mode (i.e. more likely to choose JV). The result confirmed that, when family firms perceive high uncertainty (i.e. invest in a distant region), they are more likely than non-family firms to choose JV as their entry mode. Hypothesis 1 is thus supported.

Model 6 takes both low geographic proximity (the Greater Shanghai region) and high geographic proximity (the North and Northwest region) into consideration. LR χ² value of Model 6 is 104.820 (p<0.001), indicating high explanatory power of the model. Coefficients of the two interaction terms—family firm × Greater Shanghai and family firm × North and Northwest—are 0.241 (p<0.01) and -0.528 (p<0.05) respectively, showing a consistency with Model 1 and Model 2, and thus support both Hypothesis 1 and Hypothesis 2.

Analyses on the control variables in Model 4, Model 5, and Model 6 reveal consistent results and findings with those obtained from the earlier models—large investment size and high debt ratio contribute to the choice of JV, and firms from the photonics industry and from the information services industry also tend to choose JV, as indicated in earlier models. In addition, Model 4 shows that firms from the electronic components industry are more in favor of JV. We speculate the reason may be the same as that of the photonics industry—the influence of the distribution of global supply chain in the electronic components industry.

Table 5. The influence of geographic proximity on entry mode choice.

<table>
<thead>
<tr>
<th>Geographic proximity</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>2.986</td>
<td>15.370</td>
<td>1.518</td>
</tr>
<tr>
<td>Family firm × Greater Shanghai</td>
<td>0.251</td>
<td>8.662</td>
<td>0.241</td>
</tr>
<tr>
<td>Family firm × North and Northwest</td>
<td>-0.555</td>
<td>5.628</td>
<td>-0.528</td>
</tr>
<tr>
<td>Greater Shanghai</td>
<td>0.151</td>
<td>5.434</td>
<td>0.104</td>
</tr>
<tr>
<td>North and Northwest</td>
<td>-0.198</td>
<td>1.132</td>
<td>-0.107</td>
</tr>
<tr>
<td>International experience</td>
<td>0.082</td>
<td>8.818</td>
<td>0.067</td>
</tr>
<tr>
<td>Variable</td>
<td>Coefficient 1</td>
<td>Coefficient 2</td>
<td>Coefficient 3</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------</td>
<td>---------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Investment size</td>
<td>-0.107***</td>
<td>7.263</td>
<td>-0.123***</td>
</tr>
<tr>
<td>Parent firm size</td>
<td>-0.126***</td>
<td>6.758</td>
<td>-0.063</td>
</tr>
<tr>
<td>R&amp;D intensity</td>
<td>0.021</td>
<td>1.735</td>
<td>0.015</td>
</tr>
<tr>
<td>Debt ratio</td>
<td>-0.001*</td>
<td>2.805</td>
<td>-0.002**</td>
</tr>
<tr>
<td>Semiconductor industry</td>
<td>0.175</td>
<td>1.392</td>
<td>0.174</td>
</tr>
<tr>
<td>Computers and peripherals industry</td>
<td>-0.149</td>
<td>2.517</td>
<td>-0.128</td>
</tr>
<tr>
<td>Photonics industry</td>
<td>-0.227**</td>
<td>4.586</td>
<td>-0.221**</td>
</tr>
<tr>
<td>Telecom industry</td>
<td>-0.025</td>
<td>0.038</td>
<td>0.004</td>
</tr>
<tr>
<td>Electronic components industry</td>
<td>-0.166*</td>
<td>3.051</td>
<td>-0.131</td>
</tr>
<tr>
<td>Electronics distribution industry</td>
<td>0.021</td>
<td>0.023</td>
<td>0.022</td>
</tr>
<tr>
<td>Information services industry</td>
<td>-0.553****</td>
<td>13.414</td>
<td>-0.563****</td>
</tr>
</tbody>
</table>

Observations	1600	1600	1600
Pseudo-R²	0.052	0.051	0.063
Model χ²	85.371****	83.603****	104.820****

* p<0.1, ** p<0.05, *** p<0.01, **** p<0.001

5. Discussion and conclusion

Our empirical results indicate that family firms demonstrate a more radical behavior than non-family firms when choosing their mode of entry to an emerging market. When family firms perceive high uncertainty in an emerging country, they exhibit a higher propensity than non-family firms to choose JVs as their entry mode. When family firms perceive low uncertainty, they are more likely than non-family firms to choose WOSs.

Our study brings implications and contributions to both practices and theories, but has limitations as well. We discuss the details below.

5.1. The radicalness of family firms

Our study finds that firms owned and controlled by families have their distinctive way of choosing entry mode—they are more radical, in short. No matter perceiving high or low uncertainty, they respond more dramatically than non-family firms. However, whether
radicalness turns out positive or negative for firm’s performance is still unclear. The cause of radicalness can be twofold: family firms’ radicalness may result from their better capabilities of sensing the environmental conditions, or from their over-emphasis on socioemotional objectives. If the former is the cause, radicalness may have a positive influence on firm performance. However, if the latter is the reason, then radicalness may shadow the rationality of decision-making, and thus detriments firm performance. We think the phenomenon of family firms’ radicalness is worth of further investigation, and would like to call for more researches.

Family firms’ radicalness in their FDI decision-making has profound implications for family firms, non-family firms, and policy makers alike. For family firms, if they can figure out the root cause of their radicalness, they will be able to maintain their sharpness of sensing the environmental conditions, or, on the contrary, try to avoid over-emphasizing on socioemotional motives and keep away from being irrational. Non-family firms, on the other hand, need to pay more attention to family firms’ radicalness when working with them, especially when forming a joint venture with them. Risk-sharing may be the initial motives for family firms to collaborate with a local partner, but once family firms changed their perception on uncertainty, they may quickly change their mind. For a joint venture to sustain and succeed, it is imperative for the partners to contribute supplementary resources or capabilities, in addition to help share risks. For a joint venture between a family firm and a non-family firm, it appears to be so even more. For policy makers, especially government officials who wish to attract EMNCs (mostly family firms) to invest in their country, it is especially important to tackle family firms’ concerns on uncertainty.

This unique characteristic of radicalness may persist in family firms’ other FDI decisions. For example, when family firms are choosing host countries to put in their investment, they will probably still be as radical. To verify whether this postulation is true requires more detailed studies on family firms’ perception of country specific factors, such as factor endowment, cultural distance, completeness of legal system, government efficiency, etc., and their impacts on FDI decisions. Research in this direction will benefit our understanding of family firms’ FDI decision-making, so as to understand more on EMNCs.

5.2. Implications for family business research

For the research stream of family business, our study takes both risk preference and desire to control into consideration, providing a more comprehensive view on family
business’ FDI decision making. Past research on family business has focused primarily on the risk factor, finding that family firms are more conservative (i.e. risk averse) (e.g. Filatotchev et al., 2007) in their FDI decision. Our study contributes to family business research by finding that high desire to control, in addition to risk aversion, has a significant effect on FDI decision as well.

However, our contribution is limited with the lack of sufficient studies on family firms’ desire to control. Currently, inquiries on family firms’ desire to control have only addressed on the socioemotional motives (Gomez-Mejia et al., 2007; Gomez-Mejia, et al., 2010), arguing that family firms desire to preserve their control over their company because they would like to maintain socioemotional wealth (Anderson and Reeb, 2003; Habberson and William, 1999; Kets de Vries, 1993; Thomsen and Pedersen, 2000). We suspect that motives other than maintaining socioemotional wealth may also lead to family firms’ high desire to control. Among all the possible causes, economic motives are very likely to play a crucial role in family firms’ high desire to control. We thus call for further inquiries on this aspect to advance our understanding on family businesses.

5.3. Implications for international business studies

Our study also contributes to international business studies. Comparing family and non-family firms’ FDI decisions, we found that investing company’s corporate governance matters. Specifically, we found that investing firms’ owner type (family vs. non-family) has an impact on FDI decisions. The majority of past studies on FDI decisions, including entry mode choice and subsidiary ownership strategy, have focused on the influence of firm characteristics related to the resources and capabilities of the investing company (e.g. firm size, R&D intensity), leaving corporate governance variables mostly untapped (except for a few studies such as Filatotchev et al., 2007).

Our study reveals that firms controlled by family owners and by other types of owners differ in their FDI decisions. This finding contributes to international business studies. It will be encouraging to investigate more on corporate governance’ effects on MNCs’ FDI decisions and on other aspects of international management. In addition, various dimensions of corporate governance may also have different impacts on the firms’ international management activities and consequently on the firm’s performance alike. We believe that future research in this direction will be beneficial to our understanding of MNCs.
5.4. Conclusion

Using a sample of 1600 publicly listed companies in Taiwan, we examine family and non-family firms’ differences in their entry mode decision when entering China, a promising yet uncertain emerging market. Our empirical results indicate that family firms demonstrate a more radical behavior than non-family firms when choosing their entry mode. This study makes contributions, but it is just a beginning. Nonetheless, we hope this study will inspire and trigger more future research in this direction. After all, we have known too little of the outward investment from emerging and developing economies, but they are becoming more active than ever in the global economy.

References


McGrath, R. 1997; “A real options logic for initiating technology positioning investments”, Academy of


Rivoli, P. and Salorio, E., 1996; “Foreign direct investment and investment under uncertainty”, *Journal of International Business Studies*, 27 (2), 335–357


Slangen, A. H. L., & van Tulder, R. J. M. 2009. Cultural distance, political risk, or governance quality? Towards


Young, Peng, Ahlstrom, Bruton & Yi, 2008;