The liability of closeness: Business relatedness and foreign subsidiary performance

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Abstract

It is widely accepted that business relatedness, defined as the extent to which a foreign subsidiary is related to its parent's core business, has a positive effect on subsidiary performance. With a sample of 165 Japanese subsidiaries located in China, however, we found that modestly related subsidiaries, on average, outperformed both unrelated and closely related subsidiaries, and that closely related subsidiaries performed poorly especially when the parent had a heavy majority ownership in the subsidiary and the subsidiary was at its early stage of operating in the host market. Our results indicate that being too closely related to the parent could be potentially detrimental, suggesting a liability of closeness.

Keywords: Liability of closeness, Business relatedness, Foreign subsidiary performance, China, Japan foreign direct investment

1. Introduction

When establishing a foreign subsidiary, a firm needs to decide what business the new subsidiary should pursue in the host market—specifically, how closely the subsidiary should be related to the parent's core business (Li, 1995). Termed as business relatedness, this decision has been extensively studied for its effect on subsidiary performance. With empirical support from several studies (e.g., Hennart, Kim, & Zeng, 1998; Li, 1995; Luo, 2002; Zhao & Luo, 2002), it is widely accepted that business relatedness has a positive effect on subsidiary performance. The key rationale is that the more closely a foreign subsidiary is related to its parent's core business, the more it can gain from the parent's firm-specific advantages (FSAs), such as superior expertise in technology and management.

This accepted view is suspect, however, for two reasons. First, although being related to the parent's core business confers certain obvious advantages, being too closely related might incur substantial costs as well. A foreign subsidiary relies on its parent's FSAs to overcome its liability of foreignness (Hymer, 1976), especially the costs associated with the host market particularities (i.e., the cultural, political, and economic differences of the host market from the home market) and the subsidiary's lack of knowledge thereof (Zaheer, 1995). However, a successful adaptation of the parent's FSAs has to be based on the subsidiary creatively integrating these FSAs with the host market particularities (Beamish, 1985; Lu & Beamish, 2001; Makino & Delios, 1996; McDougall & Oviatt, 1996). To this end, subsidiary managers have to appropriately balance between exploiting the parent's FSAs and exploring the host market particularities, adequately taking both into account in strategic decisions (Fang & Levinthal, 2009; March, 1991). From a behavioral perspective (Cyert & March, 1992; March & Simon, 1958; Moore & Flynn, 2008), a closely related subsidiary may be overconfident with and over-rely on the parent's FSAs while inadequately taking into account the host market particularities and, as a result, tends to underperform a modestly related subsidiary. Therefore, the effect of business relatedness on foreign subsidiary performance might not be linear, if we also assume that a modestly related subsidiary tends to outperform an unrelated one.

Second, the empirical support for the accepted view was largely based on business relatedness measured as a dichotomous variable, namely, whether a subsidiary and its parent were in the same main industry with industry defined at a certain level of generality (e.g., Hennart et al., 1998; Li, 1995; Zhao & Luo, 2002). Yet, a dichotomous measure by definition precludes the possibility of detecting a nonlinear relationship. Had these studies used a more fine-grained measure and explored the possibility of a nonlinear effect, a more sophisticated relationship could have been revealed.

We suggest an important modification to the accepted view in this study. Specifically, we hypothesize from a behavioral perspective (Cyert & March, 1992; March & Simon, 1958; Moore & Flynn, 2008) that the relationship between business relatedness and foreign subsidiary performance is not linear, but has an
inverted-U shape. Modestly related subsidiaries tend to outperform both unrelated and closely related subsidiaries. Further, we hypothesize that business relatedness, the foreign parent’s ownership level in the subsidiary, and subsidiary age have an interactive effect on subsidiary performance such that a closely related subsidiary tends to perform poorly especially when ownership level is high and the subsidiary is at its early stage. With a sample of 165 Japanese subsidiaries located in China, we found general support for our hypotheses.

2. Theory and hypotheses

2.1. The effect of business relatedness: the accepted view

Relatedness is a key concept in strategy research (Pehrssson, 2006). In the diversification literature, relatedness is commonly defined at the firm level, capturing the extent to which a firm’s businesses are related to each other (Hoskisson & Hitt, 1990; Rumelt, 1974). It is widely accepted that related diversifiers outperform not only unrelated diversifiers but also non-diversifiers (Palich, Cardinal, & Miller, 2000).

In this study, we focus on relatedness defined at the parent–subsidiary relational level, specifically, the extent to which a subsidiary is related to its parent’s core business (Sharma & Kesner, 1996). We label this construct as business relatedness so as to distinguish it from relatedness defined at the firm level. Research on business relatedness has been significantly shaped by the diversification literature, particularly by the idea that related diversifiers outperform unrelated ones (Pennings, Barkema, & Douma, 1994; Sharma & Kesner, 1996), but not much by the idea that related diversifiers also outperform non-diversifiers. It is argued that a subsidiary related to its parent’s core business can better gain from the parent’s FSAs and is thus more likely to perform well. In other words, business relatedness has a positive effect on subsidiary performance (Pennings et al., 1994; Sharma & Kesner, 1996).

This line of thinking has been extended to the international context. Compared with a domestic subsidiary, a foreign subsidiary faces the liability of foreignness (Hymer, 1976), especially the costs associated with the host market particularities and its lack of knowledge thereof (Zaheer, 1995). To overcome such a liability, it is even more important for the subsidiary to rely on its parent’s FSAs (Birkinshaw, Hood, & Jonsson, 1998; Dunning, 1993; Hitt, Hoskisson, & Ireland, 1994), whose applicability to the subsidiary depends on business relatedness between the subsidiary and the parent (Luo, 2002; Pennings et al., 1994; Sharma & Kesner, 1996).

Thus, the effect of business relatedness on subsidiary performance becomes even more salient in an international context. With empirical support from several studies (e.g., Hennart et al., 1998; Li, 1995; Luo, 2002; Zhao & Luo, 2002), it has been widely accepted that business relatedness has a positive effect on foreign subsidiary performance.

2.2. The effect of business relatedness: a behavioral perspective

A foreign subsidiary’s success hinges on effectively adapting its parent’s FSAs to the host market. Due to the significant differences between the home and the host markets (Ghemawat, 2001), a successful adaptation requires the subsidiary creatively integrating the parent’s FSAs with the host market particularities (Beamish, 1985; Lu & Beamish, 2001; Makino & Delios, 1996; McDougall & Oviatt, 1996). Thus, a subsidiary’s performance depends on the interplay between its exploitation of the parent’s FSAs and its exploration of the host market particularities. Below, we present our conceptual model of foreign subsidiary performance in Fig. 1 and then explain its key components.

As shown in Fig. 1, a subsidiary’s exploitation of the parent’s FSAs has three subcomponents. Specifically, the applicability of the parent’s FSAs captures the potential value of exploitation. To realize the potential value, the subsidiary needs to learn or gain knowledge about these FSAs (i.e., learning of parent’s FSAs). Such learning is a costly process and involves many barriers (Anderson & Gatignon, 1986; Kogut & Zander, 1993; Teece, 1977), but for the purpose of our model it suffices to note its demand for resources. In addition, the subsidiary’s knowledge of the FSAs needs to be factored into its strategic decisions (i.e., knowledge of parent’s FSAs being factored into subsidiary strategic decisions). Arguably, the actual value a subsidiary gains from exploiting its parent’s FSAs is a multiplicative product of the three subcomponents of exploitation.

Similarly, a subsidiary’s exploration of the host market particularities has three subcomponents. The importance of the host market particularities is determined by the extent to which the host market differs from the home market and captures the potential value of exploration. Had there been little difference between the host and the home markets, the importance of the host market particularities would be low and thus little could be gained from exploring such particularities. In most cases, however, the differences between countries are substantial (Ghemawat, 2001) and thus it is very important for the subsidiary to adequately consider the host market particularities (Beamish, 1985; Lu & Beamish, 2001; Makino & Delios, 1996; McDougall & Oviatt, 1996). To realize the potential value of exploration, the subsidiary has to

Fig. 1. A conceptual model: Foreign subsidiary performance as the balance between exploiting the parent’s FSAs and exploring the host market particularities.
learn or gain knowledge about these particularities (i.e., learning of host market particularities). In addition, the knowledge of such particularities needs to be factored into subsidiary strategic decisions (i.e., knowledge of host market particularities being factored into subsidiary strategic decisions). Arguably, the actual value a subsidiary gains from exploring the host market particularities is a multiplicative product of the three subcomponents of exploration.

Foreign subsidiary performance can be considered as a multiplicative product of exploitation and exploration divided by the importance of the host market particularities, squared, with the division term capturing the idea that the importance of the host market particularities also reflects the barriers for success in the host market and thus has an overall negative effect on subsidiary performance. Though a key subcomponent of our conceptual model, the importance of the host market particularities is not the focus of this study; rather, it is considered to be generally high (Chenawat, 2001) and treated as a constant. Given the importance of the host market particularities, it would be ideal for a subsidiary to maximize the values from both exploitation and exploration, yet a tradeoff exists between the two. First, learning from the parent and from the host market compete for scarce resources (e.g., human resources and managerial attention); thus, subsidiary managers need to appropriately allocate resources between the two. Second, even given their knowledge of the parent’s FSAs and of the host market, subsidiary managers need to balance the extent to which each perspective is factored into strategic decisions, which are not only a cognitive but also a behavioral and a political process (Allison, 1971; Eisenhardt & Zbaracki, 1992). Therefore, subsidiary managers need to appropriately balance between exploiting the parent’s FSAs and exploring the host market particularities, and an overemphasis on either would be detrimental to subsidiary performance (Fang & Levithal, 2009; March, 1991).² Like most theories in social sciences, our theory is not precise enough to specify the exact levels of exploitation and exploration for an optimal balance; however, it does suggest that the subsidiary has to reach a certain threshold on both exploitation and exploration.

From a rational perspective (Allison, 1971; Eisenhardt & Zbaracki, 1992), given the importance of the host market particularities, the subsidiary will optimally allocate resources (including managerial attention) among the other subcomponents of exploitation and exploration according to the applicability of the parent’s FSAs so as to maximize its performance. If so, business relatedness would directly affect only the applicability of the parent’s FSAs, but not any other subcomponent of exploitation and exploration. In other words, it would affect the subsidiary’s balance between exploitation and exploration only via the applicability of the parent’s FSAs. From this rational perspective would logically follow the accepted view that business relatedness has a positive effect on foreign subsidiary performance via its positive effect on the applicability of the parent’s FSAs.

A behavioral perspective (Cyert & March, 1992; March & Simon, 1958; Moore & Flynn, 2008), however, suggests more complexities. In reality, managerial decisions and behaviors are vulnerable to various biases and thus often deviate from the optimality standards (Moore & Flynn, 2008). In this vein, we will argue that business relatedness may affect the subsidiary’s balance between exploitation and exploration via not only the applicability of the parent’s FSAs but also the subsidiary’s overconfidence with the parent’s FSAs and that, as a result, the relationship between business relatedness and foreign subsidiary performance has an inverted-U shape.

The difficulties with an unrelated subsidiary are well-known and also suggested by our model. As the parent’s FSAs are much less applicable to an unrelated subsidiary, the subsidiary does not have much to gain from the parent (Hennart et al., 1998; Li, 1995; Luo, 2002).³ Even if subsidiary managers fully appreciate the parent’s FSAs and the host market particularities and fully take both into account in strategic decisions, the subsidiary would still be overwhelmed by the liability of foreignness (Hymer, 1976). In summary, due to the very low applicability of the parent’s FSAs, an unrelated subsidiary has an inherent difficulty appropriately balancing between exploiting the parent’s FSAs and exploring the host market particularities and, as a result, tends to underperform.

As business relatedness increases, the parent’s FSAs will become more applicable and thus offer the subsidiary the potential to overcome the liability of foreignness (Hymer, 1976). With increased relatedness, the subsidiary may leverage the parent’s FSAs to a greater extent and thus improve its balance between exploiting these FSAs and exploring the host market particularities (March, 1991). However, we argue that the positive effect of business relatedness holds only up to a point, beyond which the subsidiary begins to tilt too much toward exploitation and thus lose the balance.

From a behavioral perspective (Cyert & March, 1992; March & Simon, 1958; Moore & Flynn, 2008), a strong experience in a certain domain tends to breed overconfidence, leading one to overexploit that experience at the expense of exploration (Levinthal & March, 1993). Even if the existing experience is highly applicable, such over-exploitation may be detrimental to performance, not only long-term (March, 1991) but also short-term (Fang & Levithal, 2009). In this vein, we contend that a closely related subsidiary tends to overestimate and thus become overconfident with the applicability of the parent’s FSAs to the subsidiary, and thereby underestimate the importance of the host market particularities.

This behavioral tendency has important implications. First, between learning from the parent and from the host market, which compete for scarce resources as noted earlier (March, 1991), a closely related subsidiary may over-invest in the former but under-invest in the latter. As a result, subsidiary managers may not adequately understand the host market particularities. Second, even if subsidiary managers have adequate knowledge about these particularities, such knowledge may not be sufficiently factored into strategic decisions. Subsidiary managers may downplay the importance of the host market particularities in strategic decisions, putting too much faith in the universal applicability of the parent’s experience (which embodies its FSAs). As a result, the subsidiary’s strategic decisions tend to be dominated by the parent’s experience, without adequately taking into account the host market particularities. In addition, headquarters managers might share the aforesaid behavioral tendency of subsidiary managers. Overconfident with the applicability of the parent’s experience, they might impose such experience on the subsidiary without adequately considering the host market particularities. It is not that being closely related to the parent prevents the subsidiary from learning the host market particularities and adequately taking them into account in strategic decisions, but that being closely related tends to discourage the subsidiary from doing so.

² The idea of balance is reflected in the multiplicative equation, though our argument here certainly does not have the precision of a mathematical formula. For a multiplicative equation, given the sum of its factors (a constraint reflecting the limited resources), the product is maximized when the factors are equal.

³ It should be noted that a multinational is unlikely to choose an entirely new industry when entering a foreign market. While an unrelated subsidiary is by definition not in the parent’s core business, it is often in a business the parent already operates in its home market. However, a multinational’s FSAs arguably lie mainly in its core business. By operating outside the parent’s core business, an unrelated subsidiary has much less to gain from the parent.
In summary, a closely related subsidiary tends to overemphasize the parent's FSAs while ignoring the host market particularities and, lacking an appropriate balance between exploitation and exploration, tends to underperform. The difficulties with a closely related subsidiary probably help explain the well-known early-stage failures of many multinationals' foreign expansions in their core businesses, such as Lincoln Electric (Hastings, 1999) and Disney's European entry (Stewart, 2005). Had they entered a less closely related business in the foreign market, they might have been more cautious about the limitations of their experience and more fully taken into account the host market particularities. Compared with unrelated and closely related subsidiaries, we expect that modestly related subsidiaries are more likely to appropriately balance between exploiting the parent's FSAs and exploring the host market particularities and thus to perform well. Stated formally:

**Hypothesis 1.** The relationship between business relatedness and foreign subsidiary performance has an inverted U-shape. Specifically, modestly related subsidiaries tend to outperform both unrelated and closely related subsidiaries.

2.3. Boundary conditions: ownership level and subsidiary age

**Hypothesis 1** highlights the potential costs of a foreign subsidiary being too closely related to its parent, thereby suggesting a liability of closeness. Extending from the behavioral tendency discussed earlier, we expect this liability of closeness (as reflected by the relatively poor performance of closely related subsidiaries) will be especially salient when the parent has a high ownership level in the subsidiary. Ownership level affects the parent's motivation and ability to influence the subsidiary as well as its resource commitment (Hennart, 1988; Hill, Hwang, & Kim, 1990). When ownership level is low, the parent is less motivated and less able to influence the subsidiary's strategic decisions based on its own experience; as a result, the parent's FSAs will carry less weight in subsidiary strategic decisions. In addition, knowing the parent's low resource commitment, subsidiary managers tend to rely less on the parent's FSAs and more fully take into account the host market particularities in strategic decisions. Thus, a closely related subsidiary's imbalance between exploiting the parent's FSAs and exploring the host market particularities will be mitigated when ownership level is low.

By contrast, when ownership level is high, the aforesaid imbalance of a closely related subsidiary will be exacerbated. With a high ownership level in the subsidiary, the parent is more motivated and more able to influence the subsidiary based on its own experience (Hennart, 1988; Hill et al., 1990); as a result, the parent's FSAs will carry more weight in subsidiary strategic decisions. Also, knowing the parent's high resource commitment (Hill et al., 1990), subsidiary managers tend to rely more on the parent's FSAs and become less motivated to consider the host market particularities. In addition, even when subsidiary managers (e.g., representatives of the local partner) have an adequate knowledge of the host market, their perspective may be discounted and not be sufficiently factored into strategic decisions due to their relative lack of power (Eisenhardt & Zbaracki, 1992). In some sense, a high ownership level brings the subsidiary even closer to the parent. Given the exacerbated imbalance between exploiting the parent's FSAs and exploring the host market particularities, we expect that a closely related subsidiary will perform poorly especially when ownership level is high. Stated formally:

**Hypothesis 2.** Business relatedness and ownership level have an interactive effect on foreign subsidiary performance such that closely related subsidiaries perform poorly especially when ownership level is high.

Furthermore, we expect the liability of closeness to be especially salient at a subsidiary's early stage of operating in the host market. Specifically, we expect that a closely related subsidiary tends to perform poorly especially when ownership level is high and the subsidiary is at its early stage. In essence, a closely related subsidiary's imbalance between exploiting the parent's FSAs and exploring the host market particularities is especially severe at its early stage. The subsidiary at this stage has very limited knowledge about the host market, and is especially vulnerable to the liabilities of newness (Stinchcombe, 1965) and foreignness (Hymer, 1976) and to the behavioral tendency of overestimating the applicability of the parent's FSAs and downplaying the importance of the host market particularities. As a result, the subsidiary's strategic decisions tend to be dominated by the parent's experience (which embodies its FSAs), with little consideration of the host market particularities.

Such an imbalance, however, may improve over time. Although a closely related subsidiary tends to downplay the importance of the host market particularities and under-invest in learning about such particularities, it will nevertheless learn and increase its knowledge about the host market over time (Delios & Beamish, 2001; Zaheer & Mosakowski, 1997). Although it tends to overestimate and be overconfident with the applicability of the parent's FSAs, over time it may become more aware of its biases through experiential learning (Huber, 1991; Levitt & March, 1988) and thus mitigate this tendency. Thus, over time a closely related subsidiary tends to mitigate its imbalance between exploiting the parent’s FSAs and exploring the host market particularities. In summary, we expect that a closely related subsidiary tends to perform poorly especially when ownership level is high and the subsidiary is at its early stage. Stated formally:

**Hypothesis 3.** Business relatedness, ownership level, and subsidiary age have an interactive effect on foreign subsidiary performance such that a closely related subsidiary tends to perform poorly especially when ownership level is high and the subsidiary is at its early stage.

3. Methods

3.1. Sample and data sources

We used Japanese subsidiaries located in China to examine our hypotheses for three reasons. First, China and Japan represent two very different institutional environments, despite their historical cultural links. Whereas China reopened its door only since the late 1970s and is still transiting from a planned economy to a market one (Zhao & Luo, 2002), Japan has a highly developed market economy. The drastic differences between a developed economy and an emerging one (Prahala & Lieberthal, 1998) make the Japanese investment in China truly “foreign” and thus an ideal context to examine foreign market entry strategies. By contrast, foreign investments between countries with relatively similar institutional environments (e.g., the U.S. and Canada) are much less “foreign,” sometimes even not so different from investments between domestic regions (Herbert, 1984). Second, both China and Japan are key players in the global market, and Japan accounts for a significant portion of foreign direct investments (FDI) in China (Pan, 2003). Third, employing a single FDI home country and a single host country helps control for the factors particular to the home and host countries (e.g., cultural, political, and economic factors), and thus facilitate hypothesis tests.
Our sample consisted of Japanese subsidiaries located in China in 1996. The data on the subsidiaries were obtained from various editions of Japanese Overseas Investment, a Japanese language publication of Toyo Keizai, Inc. This is an annual directory of the foreign investment activities of Japanese firms. Toyo Keizai compiles this information by conducting an annual mail and telephone survey of major listed and nonlisted Japanese firms and supplements survey information with archival data, where required. The subsidiaries included in this data source were reasonably representative, as noted by previous studies (Delios & Beamish, 2001, 2004).

We confined the sample to greenfield investment (i.e., newly formed subsidiaries), as subsidiaries formed through acquisition and capital participation represented a very small proportion of the subsidiaries in our data (i.e., 3.8%). We confined the sample to subsidiaries in the manufacturing and service sectors, as the agricultural sector accounted for only 1.0% of the subsidiaries in our data. We further confined the sample to the subsidiaries whose foreign parents were listed in stock exchanges in Japan, because data on these firms were more readily available (from various editions of the Japanese Company Handbook). As a result, we had 928 subsidiaries in our sample for further analysis. Our sampling strategy (i.e., selecting a relatively homogeneous sample) was intended to enhance external validity and is appropriate for basic research (Calder et al., 1982; Cook & Campbell, 1979).

Our dependent variable (i.e., subsidiary profitability) had significant missing data, unfortunately. As a result, only 165 of the 928 subsidiaries had complete data for our final analysis. By comparing these 165 subsidiaries with those not included in our final analysis, we found no statistically significant difference in terms of such variables as subsidiary industry, subsidiary size, ownership level, business relatedness, and subsidiary profitability.

3.2. Measures

3.2.1. Dependent variable

Subsidary performance was measured as an ordinal variable with three levels: loss (coded as 1), breakeven (coded as 2), and gain (coded as 3). It was an assessment of a subsidiary’s financial performance in 1996 by its general manager. The data were from Japanese Overseas Investment, compiled based on the annual survey of Toyo Keizai which asked the subsidiary’s general manager to assess its profitability according to three levels (i.e., loss, breakeven, or gain). This measure has been reported by prior studies to have adequate validity (Delios & Beamish, 2001, 2004; Woodcock, Beamish, & Makino, 1994).

3.2.2. Independent variables

Business relatedness was measured as an ordinal variable with three levels. Specifically, it was coded as 1 (unrelated) if the subsidiary and its foreign parent were not in the same main industry in terms of two-digit SIC code; 2 (modestly related) if they were in the same main industry in terms of two-digit SIC code but not in terms of three-digit SIC code; and 3 (closely related) if they were in the same main industry in terms of three-digit SIC code. Nevertheless, in our regression analyses it was captured by two dummy variables. The main industry of the parent was identified from the Japanese Company Handbook. While a foreign subsidiary might also have parents in the host country (or even a third country) and multiple parents in the home country (Makino & Beamish, 1998), in this study we focus on the primary parent in the home country (i.e., the parent with the highest ownership in the subsidiary).

Our interpretation of the three levels of this variable was consistent with the diversification literature. That is, diversifying across industry groups (i.e., defined based on two-digit SIC code) was regarded as unrelated; diversifying within an industry group was regarded as related; and diversifying within a three- or four-digit SIC code was regarded as very closely related (Baysinger & Hoskisson, 1989; Palepu, 1985). We expect that our measure of business relatedness, albeit with limitations, has reasonable validity.

Ownership level was measured as the percentage of the primary foreign parent’s share in the subsidiary (Dhanaraj & Beamish, 2004). We found that an ordinal measure of ownership level (Zhao & Luo, 2002) (i.e., minority ownership: < 50%; split ownership: ≥ 50% but < 50%; wholly owned subsidiary: ≥ 90%) produced substantially similar results. Subsidiary age was measured as the number of years a subsidiary had operated up to 1996.

3.2.3. Control variables

We included a range of control variables to rule out plausible alternative explanations. At the subsidiary level, we controlled for subsidiary industry and size (Delios & Beamish, 2004; Li, 1995). Subsidiary industry was measured as a dichotomous variable, with the manufacturing sector coded as 1 and the service sector as 0. In addition, we found that using the SIC broad industry category measure (including 10 categories) produced similar results. Subsidiary size was measured as the natural logarithm of the number of employees of the subsidiary in 1996 (Dhanaraj & Beamish, 2004).

At the parent level, we controlled for firm size, product diversification, and host country experience. Parent size was measured as the natural logarithm of the number of employees of the parent in 1996. Product diversification, measured as a Herfindahl score, was calculated based on the percentage of sales by industry category in 1996. Host country experience was measured as the natural logarithm of the number of years of the parent’s investment history in China by the focal subsidiary’s founding year (Delios & Beamish, 2001). To determine the number of years of the parent’s investment history, we first identified all subsidiaries formed by the firm, using a sample of 1169 subsidiaries of listed Japanese firms in China (including subsidiaries that exited before 1996). For each focal subsidiary, we identified its founding year as well as the subsidiaries founded before that.

A limitation of this measure should be noted. That is, some of the subsidiaries identified as “unrelated” as per our scheme could be related in other ways. Specifically, a business not in the same two-digit SIC code as another could be either between-stage (e.g., car manufacturing and car dealers; aircraft manufacturing and airlines) or within-stage vertically related to the latter (Davis & Duhaime, 1992). However, we found this was not a significant concern for this study for two reasons. First, although including such subsidiaries in the “unrelated” category might have confounded the comparisons of the “unrelated” category with the “modestly related” and “closely related” categories, it had no impact on the comparison between the “modestly related” and “closely related” categories. As the focus of this study was about the potential costs of a subsidiary being too closely related to its parent (i.e., the comparison between the “modestly related” and “closely related” categories), the impact of this measurement limitation is limited. Second, we found our analytical results were similar whether or not we excluded from our analyses between-stage and within-stage vertically related subsidiaries. Identifying such subsidiaries from unrelated subsidiaries was a difficult process, often requiring judgmental call. Nevertheless, for the purpose of this exercise we identified 64 subsidiaries as still “unrelated”, 21 as “between-stage vertically related,” as “within-stage vertically related” by examining the names of the three-digit SIC codes. Our measurement scheme was preferred as it avoided such arbitrariness and was consistent with previous studies on business relatedness.
year by the same parent. We then calculated the total number of years these subsidiaries had operated by the focal subsidiary’s founding year, which was the number of years of the parent’s investment history in China.

3.3. Estimation method

We used ordinal logistic regression to examine our hypotheses. Ordinal logistic regression is an extension of binary logistic regression that allows a simultaneous comparison of more than one contrast (Long, 1997). This technique is appropriate when the dependent variable is ordinarily measured, as was subsidiary profitability in this study. Maximum-likelihood estimation is used to obtain values for coefficient estimates. The interpretation of the coefficients is the same as for binary logistic regression. In this study, if a variable has a significant and positive coefficient, it means that this variable is positively associated with subsidiary profitability. As our model includes interaction terms, we standardized all continuous independent variables to eliminate nonessential multicollinearity and facilitate interpretation (Aiken & West, 1991).

4. Results

Table 1 presents the means, standard deviations, and correlations of the variables in this study, based on the 165 subsidiaries included in our final analysis.

The results of the ordinal logistic regressions were reported in Table 2. Model 1 included the control variables as well as ownership level and subsidiary age (i.e., the two independent variables whose main effects were not the focus of this study); business relatedness was added in Model 2; the two-way interaction of business relatedness and ownership level was added in Model 3; finally, the three-way interaction of business relatedness, ownership level, and subsidiary age, and the two-way interactions of subsidiary age with business relatedness and ownership level were added in Model 4. All models were significant, and the assumption of parallel lines (i.e., the slope

<table>
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<tr>
<th>Variables</th>
<th>Mean</th>
<th>S.D.</th>
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<td>1. Subsidiary industry</td>
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<td>.41</td>
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<td>2. Subsidiary size</td>
<td>4.66</td>
<td>1.49</td>
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<td>3. Subsidiary age</td>
<td>4.90</td>
<td>2.94</td>
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<td>4. Parent size</td>
<td>7.78</td>
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<td>5. Parent product diversification</td>
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<td>.17</td>
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<td>6. Host country experience</td>
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<td>7. Ownership level</td>
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<td>27.66</td>
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<td>8. Business relatedness</td>
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<td>.85</td>
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<td>9. Subsidiary profitability</td>
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<td>.83</td>
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Table 2

<table>
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<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
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<td>Subsidiary industry</td>
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<td>-.02 (.45)</td>
<td>-.13 (.45)</td>
<td>-.28 (.47)</td>
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<td>.29 (.17)</td>
<td>.30 (.17)</td>
<td>.30 (.18)</td>
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<td>Parent size</td>
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<td>.04 (.18)</td>
<td>-.01 (.18)</td>
<td>-.02 (.19)</td>
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<tr>
<td>Parent product diversification</td>
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<td>-.25 (.17)</td>
<td>-.21 (.17)</td>
<td>-.21 (.18)</td>
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<td>Parent’s host country experience</td>
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<td>-.08 (.17)</td>
<td>.03 (.18)</td>
<td>.05 (.18)</td>
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<td>Ownership level (Ownership)</td>
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<td>-.23 (.17)</td>
<td>-.03 (.45)</td>
<td>-.38 (.55)*</td>
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<tr>
<td>Subsidiary age (Age)</td>
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<td>.74 (.20)**</td>
<td>.71 (.19)**</td>
<td>2.37 (1.36)!</td>
</tr>
<tr>
<td>Business relatedness (Relatedness)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Unrelated</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Modestly related (reference group)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Closely related</td>
<td>-.84 (.51)*</td>
<td>-.97 (.58)*</td>
<td>-2.08 (1.16)*</td>
<td>-</td>
</tr>
<tr>
<td>Relatedness &gt; Ownership</td>
<td>1.21 (.50)*</td>
<td>4.11 (1.56)*</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Modestly related &gt; Ownership</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Closely related &gt; Ownership</td>
<td>.34 (.56)</td>
<td>3.13 (1.59)*</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Relatedness &gt; Age</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>Unrelated &gt; Age</td>
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<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Modestly related &gt; Age</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Closely related &gt; Age</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Ownership &gt; Age</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Unrelated &gt; Ownership &gt; Age</td>
<td>4.39 (1.86)*</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Modestly related &gt; Ownership &gt; Age</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
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<td>-</td>
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<tr>
<td>Nagelkerke R-square</td>
<td>.16</td>
<td>.19</td>
<td>.24</td>
<td>.29</td>
</tr>
<tr>
<td>Number of observations</td>
<td>165</td>
<td>165</td>
<td>165</td>
<td>165</td>
</tr>
</tbody>
</table>

* Number of observations is 165; correlations with an absolute value greater than .15 are significant at p < .05.

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"Table 1 Descriptive statistics and correlation matrix.""
coefficients were the same across response categories) held for all models ($p > .10$).

Model 2 indicated that modestly related subsidiaries performed significantly better than unrelated subsidiaries (coefficient = $-.95$, $p < .05$) and marginally significantly better than closely related subsidiaries (coefficient = $-.84$, $p < .10$). Thus, the results supported Hypothesis 1, which predicts an inverted U-shaped relationship between business relatedness and foreign subsidiary performance.

Model 3 showed that the interaction terms were significant ($p < .05$), suggesting support for Hypothesis 2 that business relatedness and ownership level have an interactive effect on subsidiary performance. To facilitate interpretation, we plotted the interaction effect in Fig. 2 following the procedure suggested by Aiken and West (1991). The plot indicated that closely related subsidiaries performed poorly especially when the foreign parent had a heavy majority ownership in the subsidiary (e.g., 83%). Such results were consistent with our expectation that closely related subsidiaries perform poorly especially when ownership level is high.

Model 4 showed that the three-way interaction terms were significant, suggesting support for Hypothesis 3 that business relatedness, ownership level, and subsidiary age have an interactive effect on subsidiary performance. To facilitate interpretation, we plotted the interaction effect in Fig. 3 following the procedure suggested by Aiken and West (1991). Overall, the plot showed that closely related subsidiaries performed poorly especially when ownership level was high and subsidiary age was low, consistent with the prediction of Hypothesis 3. In addition, the plot showed that the hypothesized inverted-U shaped relationship between business relatedness and foreign subsidiary performance (i.e., Hypothesis 1) was most applicable to subsidiaries in which the foreign parent had a heavy majority ownership and that were at an early stage, suggesting two important boundary conditions for the hypothesis.

Fig. 3 suggested that, on average, subsidiary performance improved as subsidiary age increased, consistent with the expectation that, over time, the subsidiary gradually accumulates knowledge about the host market and thus mitigates its liability of foreignness (Delios & Beamish, 2001). In addition, it seemed to indicate, unexpectedly, that modestly related subsidiaries performed very poorly when the parent had a heavy majority ownership and the subsidiary was beyond its early stage. Our further examination of the data indicated that among the 18 cells in the interaction plot, there were a very small number of observations in the cell representing the combination of modestly related, heavy majority ownership, and relatively old age. For example, when heavy majority ownership was defined as being above one standard deviation and relatively old age as being above the mean, there was only one observation in that cell; when heavy majority ownership was defined as being above .50 standard deviation and relatively old age as being above the mean, there were only two observations in that cell. Such a cell with a very small number of observations could lead to spurious results regarding that cell in a logistic regression which is based on maximum-likelihood estimation. Thus, we suspect that the unexpected result was spurious due to the cell with a very small number of observations.

5. Discussion

In this study, we suggest an important modification to the accepted view that business relatedness has a positive effect on foreign subsidiary performance. With a sample of Japanese subsidiaries located in China, we found that modestly related subsidiaries, on average, outperformed both unrelated and closely related subsidiaries, and that closely related subsidiaries performed poorly especially when the foreign parent had a heavy majority ownership in the subsidiary and the subsidiary was at its early stage of operating in the host market. These findings highlight the potential costs of a subsidiary being too closely related to its foreign parent, thereby suggesting a liability of closeness; a liability that is especially salient when the parent has a heavy majority ownership in the subsidiary and when the subsidiary is at its early stage.

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6 We believe that our interpretation of this marginally significant result was appropriate for two reasons. First, we had a quite modest sample size (i.e., 165), which meant it was appropriate to relax the significance level a little bit (e.g., .10 or even higher). Otherwise, type 2 error might be unduly high. Second, our interpretation was corroborated by the interaction plot Fig. 3(a)—that is, when ownership level was high and subsidiary age was low, the comparison between modestly and closely related subsidiaries was highly significant.

7 We tried to address this issue by dichotomizing the subsidiary age variable (e.g., median split or 40–60 split); however, with our data this technique did not substantially increase the number of observations in that cell and thus could not adequately address the issue.
Overall, the results of this study were consistent with our reasoning from a behavioral perspective (Cyert & March, 1992; March & Simon, 1958; Moore & Flynn, 2008). That is, a closely related subsidiary tends to overestimate and thus become overconfident with the applicability of the parent's FSAs, and thereby underestimate the host market particularities. As a result, it tends to over-exploit the parent's FSAs without adequately exploring the host market particularities and, lacking an appropriate balance between the two, tends to underperform (Fang & Levinthal, 2009; March, 1991).

5.1. Theoretical implications

This study has several theoretical implications. First, our findings of an inverted-U shaped relationship between business relatedness and foreign subsidiary performance and of its boundary conditions revealed a more nuanced picture than the accepted view on this issue (e.g., Hennart et al., 1998; Li, 1995; Luo, 2002; Zhao & Luo, 2002). To fully understand the mechanisms through which business relatedness affects foreign subsidiary performance, we need to go beyond the rational perspective (Allison, 1971; Eisenhardt & Zbaracki, 1992) to incorporate insights from other perspectives (e.g., the behavioral and political perspectives).

Second, this study suggests the potential value of applying a behavioral perspective (Cyert & March, 1992; March & Simon, 1958; Moore & Flynn, 2008) to our research on international business strategy, even in areas not explicitly about managers. It is through managerial decisions and behaviors that many strategy variables affect organizational outcomes: an appreciation of how such variables affect managerial biases and tendencies would serve as a solid micro-foundation for our research on international business strategy.

Third, we proposed a conceptual model of foreign subsidiary performance based on the exploitation and exploration idea (March, 1991)—that is, a subsidiary's performance depends on its balance between exploiting the parent's FSAs and exploring the host market particularities. With this model, researchers can assess the effect of a variable on foreign subsidiary performance through examining its impact on the subcomponents of exploitation and exploration and the interplay between the two. We hope this model can be valuable for future research in this area.

5.2. Practical implications

Although the results of this study suggest that modestly related subsidiaries tend to outperform both unrelated and closely related subsidiaries (especially when the parent has a heavy majority ownership and the subsidiary is at its early stage), it would be simplistic to infer that firms should always pursue modestly related businesses when entering foreign markets. First, in this study we focused on the subsidiary perspective rather than the parent perspective, but these two perspectives can be different. To enhance its knowledge base and thus its overall performance, the parent may engage in continuous entries and exits (Chang, 1996). The failure of an individual subsidiary does not necessarily suggest an unsound decision of the parent, but may be a necessary, justified cost of exploration (Knot & Posen, 2005; Levinthal & March, 1993). This may partly explain some firms’ entry into unrelated businesses despite the high likelihood of poor performance.

In addition, this study does not suggest that, when entering foreign markets, firms should not pursue their core businesses where their FSAs largely lie, or that closely related subsidiaries necessarily perform poorly. Indeed, entering a foreign market with its core business seems to be a logical choice for many multinationals: successful cases abound not only from the parent perspective but also from the subsidiary perspective. However, this study does caution against the tendency of closely related subsidiaries to over-relay on the parent’s FSAs while ignoring the host market particularities especially when the parent has a heavy majority ownership and the subsidiary is at its early stage. As realizing and adequately understanding a potentially harmful tendency is the first step to remedying it (Kahneman & Tversky, 1979; Moore & Flynn, 2008), this study could be valuable especially for managers of closely related subsidiaries.

5.3. Limitations and future research

This study has several limitations. The first has to do with our measure of business relatedness. Although our ordinal measure was an improvement over the dichotomous measure of many previous studies and allowed us to detect a nonlinear relationship, it was still quite crude. In addition, our measure captures only one aspect of relatedness and at a relatively general level (Pehrsson, 2006). Future research could develop and employ more fine-grained measures of business relatedness.

The second limitation has to do with our archive-based, quantitative research design. Notwithstanding its merits (e.g., replicability), this design does not allow us to directly examine the intervening mechanisms (i.e., the dashed circles in Fig. 1). For example, while in developing our hypotheses, we argue that the managers of a closely related subsidiary tend to overestimate and thus become overconfident with the applicability of the parent’s FSAs, we did not and, with our design, could not empirically examine this argument directly. While such a limitation is common to archive-based quantitative studies and is justified for an initial study, future research could examine the intervening mechanisms, probably with different research designs such as survey and qualitative studies, to gain a fuller understanding of the phenomenon.

Third, we focused on a single country’s subsidiaries located in another single country in a single time period (i.e., Japanese subsidiaries located in China in the mid 1990s). Although this is appropriate for an initial study as it helps enhance internal validity (Calder et al., 1982; Cook & Campbell, 1979), future research could examine our hypotheses in other contexts (e.g., different home countries, host countries, or time periods); such research would be especially valuable when it also intends to refine and extend the theory. For example, our hypotheses are based on the assumption of “foreignness” experienced by the subsidiaries, which, however, varies from context to context. It is possible that in a less “foreign” context (e.g., U.S. subsidiaries located in Canada after NAFTA), our hypothesized effects might become less salient. Such a possibility warrants future research attention.

5.4. Conclusion

This study suggests an important modification to the widely accepted view that business relatedness has a positive effect on foreign subsidiary performance; that is, the effect is not linear but has an inverted-U shape. It highlights the potential costs of a subsidiary being too closely related to its foreign parent especially when the parent has a heavy majority ownership in the subsidiary and the subsidiary is at its early stage of operating in the host market, suggesting a liability of closeness. Our findings thus indicate a potential harmful tendency of a closely related subsidiary to overly rely on the parent’s FSAs while inadequately taking into account the host market particularities. Hopefully, this study can help draw attention to, and thus help practitioners to mitigate, this tendency.

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References


