in institutional investors and international expansion in restaurant industry

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Institutional investors and international diversification in U.S. restaurant industry

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Abstract

This study focuses on one potential explanation, namely the institutional investor ownership, to determine if it can explain the internationalization behavior in the restaurant industry. While pension and mutual fund firms support international diversification, pressure from investments by banking firms leads to lower international diversification. Investments from Insurance firms are not related to international diversification whereas investments by brokerage firms are negatively related to internationalization.

Key words: institution, diversification, internationalization

Introduction

Many U.S restaurant firms head overseas to increase market share and grow earnings (Singh, Upneja & Dalbor 2003). Multinational restaurant firms outperform domestic firms in growth of operating income and pre-tax profitability (Singh et al. 2003). While international units and sales in the top 100 US restaurant chains in 1997 grew by 12.7 and 7.2 percent respectively, their domestic counterparts increased 2.8 and 4.8 percent respectively (Technomic Inc. 1998; Hua & Upneja 2007). However, there are contrasting previous studies of internationalization. Several studies found positive relation between internationalization and firm performance (Oak & Dalbor 2010; Denis et al. 2002; Morck & Yeong 1992). On the other hand, general finance literature finds that firm performance may decline due to the organizational complexity and the uncertainty related to operating in new markets (Fatemi 1984; Geringer et al. 1989; Hitt et al. 1997). Restaurant literature (Singh et al. 2004; Hua & Upneja 2007) identified the risk of international diversification such as cultural and religious differences, different tax and accounting structures, political stability, fluctuations in relative values of currencies, and unfavorable macroeconomic conditions.

It is posited that the firm’s risk-taking behavior may change depending on ownership structure. Past research has conclusively shown that institutional investors influence firm’s strategic decisions (David et al. 2001; Gillan & Stark 2003; Hartzell & Stark 2003). Over time, institutional investors have dramatically increased their holding of stocks in general and hospitality stocks in particular (Oak & Dalbor 2008a). Therefore, it is reasonable to assume that the decision-making of the restaurant managers is greatly influenced by the kind of stake different groups of institutional investors have in the firm. One of the important decisions made by managers is the extent of international diversification. As stated earlier, there is considerable risk involved in international diversification because the returns take longer to materialize and are riskier in nature (Singh et al. 2004; Hua & Upneja 2007). Different types of institutional investors have different time horizons for earning returns on their investments (Tihanyi et al. 2003). For example, banks have a very short-term horizon and thus are expected to oppose risky investments of all kinds, including international diversification. On the other hand, public pension funds hold stocks for the long term (Tihanyi et al. 2003), thus they are expected to support long-term projects. Given the increasing influence of different kinds of institutional investors, this study will investigate whether institutional investors have an impact on the restaurant firm’s international diversification.
Literature review

The most significant phenomenon in the restaurant industry in the recent past has been the substantial rise in the global fast food or quick service segment. The fast food segment has been influenced by its development in the US and in 2003 accounted for more than 25 percent of the world catering market (Ball & Roberts 2003). According to the International Hotel and Restaurant Association (1998 p5), the population per restaurant unit in North America was 384. Other global regions such as Europe and South Asia had population ratios of 616 and 2,032 respectively. The population per restaurant unit in regions except South America was higher than North America. Thus, there is much more growth potential in other parts of the world. While the restaurant sector developed at varying rates in different countries, international diversification has been substantial over the last three decades (Ball & Roberts 2003). According to the Technomic Inc. report (2010), “international performance by the U.S. top 500 restaurant chains outperformed their domestic counterpart growth in 2009. International sales (up 3.3 percent) outpaced U.S. sales (down 0.8 percent). International unit growth was also up 5.2 percent versus 0.3 percent for U.S. unit.” Casual dining operations grew slowly in international diversification (Lee et al. 2008). While McDonald’s has 57 percent international units (18,498 over 32,478 units in 2009), Darden and Brinker’s restaurants have 3.7 percent (65 over 1,773 units in 2009) and 12 percent (201 over 1,689 units in 2009) international units (McDonald’s 2010; Darden 2010; Brinker 2010). In Yum brands and McDonald’s, more than 50 percent of revenues are from overseas market in 2008 (Basham 2010). McDonald’s revenues are internationally diversified in 2008 with no region accounting for even 50 percent of the total revenue: U.S. 42 percent, Europe 31 percent, Asia/Pacific, the Middle East, and the Africa 18 percent, other countries 9 percent (Basham 2010).

Institutional investors are usually involved in strategic decision-making process of corporations. When U.S. institutional investors hold portfolios of foreign securities, they meet barriers such as capital flows, institutional restrictions, and information asymmetry in international equity markets (Tihanyi et al. 2003). Thus, institutional investors feel that international diversification through multinational firms, listed in US stock exchanges, is a better diversification strategy at a lower cost. Federal Reserve Board’s Flow of Funds reports that institutional investors owned about 7 percent of U.S. equities in 1950 and 51 percent in 2004 (Chen et al. 2007). In the restaurant industry, average institutional ownership is 47.5 percent between 1999 and 2003 (Tsai & Gu 2007). In the lodging industry, institutional investors held 30 million shares (985 million dollars) in 1980 and they increased their holdings to 1,479 million shares (42,271 million dollars) in 2004 (Oak & Dalbor 2008 a). Of the institutional holdings, pension funds held 72.74 percent of total lodging shares in 2004; bank and brokerage firms had 13.02 percent and 11.56 percent each. Insurance and mutual funds held 0.95 and 1.73 percent each in 2004.

When institutional investors disagree with managerial decisions or face lower than expected stock performance, they sell out their shares (exit strategy). However, in the recent past growing number of institutional shareholders have become active monitors instead of remaining passive investors (voice strategy) (Tsai & Gu 2007; Bathala et al. 1994; Graves & Waddock 1990; Tayor 1990). Tools of corporate governance can be one-to-one meetings, voting on stockholder resolutions and focus lists. Mallin (2006) describes the mechanisms of institutional investor’s role in corporate governance. The meetings between institutional investors and investee companies are an important communication tool. Because corporate managers arrange these meeting with large institutions, individual investors do not have a chance to attend. The meetings are held at a high level and have important members of the board in attendance. The most discussed topics at the meetings are areas of the firm’s strategy and planning to achieve the objectives. Therefore it is clear that institutional investor’s views influence the board at the planning process.

Issues raised in the investee company’s AGM are voted by large institutional investors (Mallin 2006). Institutional investors make focus lists of firms to target, including those firms that are either underperforming in earnings or those that have underperformed a main index, for example S&P 500. If firms do not respond to the institutional investor’s inquiries about underperformance, institutional investors may look for changing directors on the board.

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Several empirical studies demonstrate the influence of institutional investors on the firm’s strategy decision. David et al. (2001) find that institutional investor activism is positively associated with R&D inputs over both the short and long term. This association is stronger in strategic contexts where R&D investments tend to increase firm value, especially when firms have high growth opportunities. Gillan and Starks (2003) posit that the rise of professional money managers provides increased monitoring of management of firms in which these managers invest money. Hartzell and Starks (2003) find that firms with a higher concentration of institutional investors have lower managerial compensation. Therefore, it is well established that institutional holdings influence executive compensation structure.

Depending on the type of institution investor, the role of monitoring differs. Brickley et al. (1988) report that in addition to individual investors, banks and insurance firms are better supporter of managerial decisions than other types of institutional investors (mutual funds and investment advisors) in setting up antitakeover amendment proposals. Chen et al. (2007) find that large holdings of independent long-term institutions (investment companies, independent investment advisor and public pension funds) better predict post-merger performance. On the other hand, large holdings of short-term institutions (insurance companies and banks) do not predict post-merger performance. Institutions with strict fiduciary standards (bank) or firms with the shorter investment horizon show stronger preference for short-term earnings over long-run value (Bushee 2001). In the lodging industry, pension funds have a long-term horizon and prefer to invest in value stocks (high book-to-market ratio). The rest of the institutional investors (bank, mutual fund and brokerage firms) prefer growth stocks (low book-to-market ratio) (Oak & Dalbor 2008b). In the restaurant industry, firm-risk is not a significant factor to choose stocks because the industry has a low systematic risk (Tsai & Gu 2007).

For long-term returns, institutional investors can encourage managers to engage in international diversification. Internationalization can raise financial performance, but it takes time to realize profits (Bhide 2000). Some institutional investors also have business relationships with the firms in which they are investing, whereas other institutional investors may not have a similar kind of relationship. Therefore, we can categorize institutions in two groups. Pressure-resistant institutions (pension fund, mutual fund, endowments and foundations) do not have vital business relations with firms in which they invest and therefore have greater influence on firm innovation. Pressure-sensitive institutions (insurance firms and banks) (Tihanyi et al. 2003) on the other hand attempt to do business with firms and thereby are susceptible to management persuasion. Ownership by pressure-sensitive institutions is significantly negatively associated with international venturing. Pressure-resistant ownership is positively but marginally associated with international venturing (Zahara et al. 2000). These results support the view that some institutions encourage international ventures. Tihanyi et al. (2003) reports that pension funds prefer firms with international diversification because they are oriented to long-term performance and buy-and-hold strategy.

Hypotheses

As discussed earlier, pressure-resistant groups (pension fund, mutual fund, brokerage firm) prefer international diversification. Pension funds and brokerage firms have a long-term horizon and therefore prefer to invest in firms with an international strategy. Pension funds tend to have emphasis on yields over longer time horizon than mutual funds (Tihanyi et al. 2003). In order to protect the long-term interests of their investors, pension fund hold very diversified portfolios (Bethal & Liebeskind 1993). Mutual funds invest in firms with international diversification because even the announcement of international diversification has positive financial returns in the short-term. Because mutual fund’s managers are compensated by quarterly evaluation of the sizes and net asset values of their portfolios, they tend to hold portfolio in a short term (Tihanyi et al. 2003). Previous studies show that pressure-resistant groups tend to support long-term value-creating activities such as R&D (Kochhar & David 1996) and long-term incentives in CEO compensation packages (David et al. 1998).
Banks have strict fiduciary standards and prefer short-term earnings. Similarly, insurance firms also have short-term horizons and constitute the pressure sensitive group, along with Banks. When conflict arises, these pressure-sensitive investors tend to sell their stocks and not challenge management (Jacobs 1991; Zahra et al. 2000). Both insurance firms and banks do not prefer international diversification. Therefore, we propose the following hypotheses. All these hypotheses are stated in the alternative form and relate to ownership of restaurant firm stock by institutional investors.

H1: Bank ownership will be negatively associated with international diversification.
H2: Insurance ownership will be negatively associated with international diversification.
H3: Mutual fund ownership will be positively associated with international diversification.
H4: Brokerage firm ownership will be positively associated with international diversification.
H5: Pension fund ownership will be positively associated with international diversification.

Data & Methodology

Sample: Between 1994 and 2004, sample of all publicly traded restaurant firms were identified with NAICS 722110 in the COMPSTAT Annual Data Tape, accessed through WRDS. If any firm-year did not have data on the variables of interest for this study, such as institutional ownership or internationalization, that firm-year was excluded. We started with identifying restaurant firms that had international operations and then collated that information with the institutional stock holding data. We finally ended with seven restaurant firms (Table 1) that had both international operations and also holding of its stock by institutional investors. Because we are interested in the investing behavior of each type of institutional investor in purchasing stocks of internationalized restaurant firms, we did not aggregate institutional ownership. Previous hospitality studies (Oak & Dalbor 2008b; Oak & Dalbor 2009) also used ownership data from each type of institutional investor for analysis without adding up institutional ownership. The final sample consisted of 7,909 firm-year observations categorized by institutional type. Because institutional ownership is quarterly data and is not aggregated, final sample is large, given that only seven restaurant firms are in the sample.

Dependent variable: In this study, international diversification is defined as geographic expansion of operations. If U.S. firms have earnings from overseas markets, they are considered as internationally diversified. International diversification is measured as foreign earnings divided by total earnings (Hua & Upaneja 2007; Tihanyi et al. 2003). This is the most common measure used in hospitality and mainstream financial research. As reported earlier, earnings numbers were extracted from COMPSTAT.

Independent variable: Institutional ownership data is collected from the Thompson Financial Spectrum database (Oak & Dalbor 2008 a; Oak & Dalbor 2008 b). According to SEC regulations, “all institutions with over $100 million in discretionary funds under management and all positions in individual stocks greater than $200,000 or 10,000 shares need to file form 13(f) within 45 days after the last day of each quarter (Oak & Dalbor 2008 a p6).” This study uses these forms from 1994 to 2004 in the CDA/Spectrum 13(f) Institutional Stock Holdings. Quarterly institutional ownership has five categories: banks, insurance companies, mutual funds, brokerage firms and pension fund. Institutional ownership is related to firm’s characteristics. In the lodging industry, bank and brokerage firms were dominant institutional investors in the 1980s and early 1990s. Pension fund has been top institutional investor after 1998. In the hotel industry, institutional ownership is related to size, book value to assets to market value of assets, debt ratio, and price and capital expenditure to assets (Oak & Dalbor 2008b). In the restaurant industry, institutional ownership is positively related to Tobin’s Q, size and ROA (Tsai &
Debt and institutional ownership is negatively related. Institutional ownership is calculated as shares owned by institutions divided by total shares outstanding.

**Control variables:** When firms dominate domestic markets, they may expand internationally at the same time and use economies of scale (Hua & Upneja 2007). Previous studies show positive relationship between firm size and international diversification (Tihanyi et al. 2003; George et al. 2005). Fatemi (1994) and Katobe (1990) report that international diversification needs large capital for new plants, human resources and information systems. Large firms have enough resources for operating in foreign markets (Tihanyi et al. 2003). Therefore, this study uses firm size as a control variable, which is calculated as the logarithm of total assets (Tihanyi 2003).

Firm with high leverage (risky) are less likely to expand internationally due to higher risk inherent in internationalization. We calculate leverage as total liabilities over total assets following Hua and Upneja (2007). Once the domestic restaurant market is saturated, firms grow internationally. George et al. (2005) used industry opportunity variable to determine small multinational firms’ internationalization. They examined whether domestic market conditions rather than foreign market opportunities promotes internationalization. In this study, the penetration rate is to measure industry opportunity in the U.S. restaurant market as an internationalization motivation. Hua and Upneja (2007) found that penetration of domestic market positively affects a firm’s internationalization decision. This study uses penetration rate as individual firms’ annual domestic sales over annual industry domestic sales (Hua & Upneja 2007).

Previous studies (Riahi-Belkaoui 1996; Geringer et al. 1989) showed positive relationship between internationalization and performance. That relationship may depend on firms’ abundant resources to cover the costs of global business (Tihanyi et al. 2003). Similar to these previous studies, we use ROA as the performance measurement. Using ROA also helps us to compare this result with previous studies (Riahi-Belkaoui 1996; Lu & Beamish 2001)

**Analysis:** This study used pooled regression model to test hypotheses, which has been used in previous studies on institutional holdings (Oak & Dalbor 2008b; Tihanyi et al. 2003). This method is a statistical tool that is used when the dependent and independent variables are metric (Hair et al. 1998). We run regressions by type of institutional investors (bank, insurance, brokerage firm, mutual fund and pension fund). The results show correlation matrix and regressions by institutional investor’s type. We checked for basic assumptions for regression, normality, linearity and homoscedacity. The three assumptions were checked by residual scatter plots, in which one axis is predicted scores of international diversification and the other axis is errors of prediction (Tsai & Gu 2007; Tabachnick & Fidell 2001). Residual scatterplots did not show any serious violation of normality, linearity and homoscedacity of the pooled regression in this study. We identified a very limited number of outliers by using leverage points. Leverage point is an observation that significantly influences on the regression results due to its differences from other observations on one or more of independent variables (Hair et al. 1998). We ran the pooled regression model with and without outliers. Because the outliers did not affect the statistical results, we kept outliers in the sample.

**Results**

After restaurant firms (NAICS 722110) were extracted from the COMPUSTAT, only those that had foreign earnings and had institutional holdings were kept in the sample. There are seven firms that reported both foreign earnings and institutional holdings and these firms are identified in Table 1. Yum brand was formally Tricon Global International which changed its name in May 2002. Tricon Global International is included for the analysis prior to May 2002.
Table 1. Sample firms

<table>
<thead>
<tr>
<th>Coname</th>
<th>Ticker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mcdonald’s Corp</td>
<td>MCD</td>
</tr>
<tr>
<td>Worldwide Restaurant Concept</td>
<td>SZ</td>
</tr>
<tr>
<td>Elxsi Corp.</td>
<td>ELXS</td>
</tr>
<tr>
<td>Wendy’s International Inc.</td>
<td>WEN</td>
</tr>
<tr>
<td>Darden Restaurant Inc.</td>
<td>DRI</td>
</tr>
<tr>
<td>*Yum Brands Inc.</td>
<td>YUM</td>
</tr>
<tr>
<td>Sizzler International Inc.</td>
<td>SIZZ</td>
</tr>
</tbody>
</table>

*Tricon Global Restaurant changed its name to Yum Brands in May 2002. This study used Tricon Global Restaurant for analysis prior to May 2002.

Table 2 shows descriptive statistics. International diversification in sample firms was 39 percent, which is very similar to the 41 percent in other industries (Tihanyi et al. 2003). While the percentage of institutional ownership in restaurant firms ranged from forty-five to fifty percent in previous research (Tsai & Gu 2007), the same ratio in our sample averaged twenty-four percent and median was fifteen percent. By comparing our sample with Tasi and Gu’s study (2007), leverage, ROA and size in sample firms are larger than those in restaurant firms in Tsi and Gu (2007). Thus, restaurant firms with international diversification tend to have higher leverage, ROA and size.

Table 2. Descriptive statistics for the sample

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>International Diversification</td>
<td>7909</td>
<td>0.385</td>
<td>0.212</td>
<td>0.473</td>
</tr>
<tr>
<td>Institutional holding</td>
<td>7909</td>
<td>0.241</td>
<td>0.227</td>
<td>0.147</td>
</tr>
<tr>
<td>Size</td>
<td>7909</td>
<td>9.119</td>
<td>1.022</td>
<td>9.811</td>
</tr>
<tr>
<td>Leverage</td>
<td>7909</td>
<td>0.727</td>
<td>0.248</td>
<td>0.571</td>
</tr>
<tr>
<td>Penetration</td>
<td>7849</td>
<td>0.149</td>
<td>0.060</td>
<td>0.195</td>
</tr>
<tr>
<td>ROA</td>
<td>7909</td>
<td>0.133</td>
<td>0.053</td>
<td>0.133</td>
</tr>
</tbody>
</table>

- International diversification is measured by firms sales from foreign operations divided by total firm sales.
- Institutional holdings for a specific stock in a given quarter are calculated by shares owned by institutions divided by total shares outstanding.
- Size is the logarithm of total assets.
- Leverage is calculated by total liabilities over total assets.
- Penetration rate is calculated by individual firms’ annual domestic sales over annual industry domestic sales.
- ROA is net income divided by total assets at the end of the year.

Table 3 is the correlation matrix of the variables of interest. International diversification has a significantly negative relationship with institutional ownership, leverage and ROA. Size and penetration are significantly positively related to the international diversification.

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1While Tsai and Gu (2007) analyzed institutional holdings of 49 restaurant firms, this study uses 7 restaurant firms with international operations.
Table 3. Correlations

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. International diversification</td>
<td>1.00</td>
<td>-0.377***</td>
<td>0.772***</td>
<td>-0.642***</td>
<td>0.965***</td>
<td>-0.068***</td>
</tr>
<tr>
<td>2. Institutional ownership</td>
<td>-0.377***</td>
<td>1.00</td>
<td>-0.335***</td>
<td>0.504***</td>
<td>-0.434***</td>
<td>0.425***</td>
</tr>
<tr>
<td>3. Size</td>
<td>0.772***</td>
<td>-0.335***</td>
<td>1.00</td>
<td>-0.687***</td>
<td>0.966***</td>
<td>-0.057***</td>
</tr>
<tr>
<td>4. Leverage</td>
<td>-0.641***</td>
<td>0.504***</td>
<td>-0.687***</td>
<td>1.00</td>
<td>-0.650***</td>
<td>0.392***</td>
</tr>
<tr>
<td>5. Penetration</td>
<td>0.965***</td>
<td>-0.434***</td>
<td>0.966***</td>
<td>-0.650***</td>
<td>1.00</td>
<td>-0.080***</td>
</tr>
<tr>
<td>6. ROA</td>
<td>-0.068***</td>
<td>0.425***</td>
<td>-0.057***</td>
<td>0.391***</td>
<td>-0.080***</td>
<td>1.00</td>
</tr>
</tbody>
</table>

***: significant at the level of 0.1%

- International diversification is measured by firms sales from foreign operations divided by total firm sales.
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- ROA is net income divided by total assets at the end of the year.

In order to check for multicollinearity, we used variance inflation factors (VIF) for all the regressions. No VIF score is close to the threshold of 10. Thus, multicollinearity is a problem in this study.

Model 1 in table 4 includes all types of institutions. International diversification is positively related to institutional ownership, penetration and ROA and negatively related to size and leverage. Because pension fund accounts for 63 percent of total observation, model 1 (which includes all firms) is similar to model 6 that includes only pension funds.

The regression model involving banks (model 2 in table 4) indicates international diversification is negatively related to institutional ownership, size and leverage. The results support hypothesis 1, which states that bank ownership, is negatively associated with international diversification. Banks with short investment horizons prefer short-term earnings. Thus, they are less likely to invest in firms with active international diversification agendas. International diversification is positively related to penetration and ROA.

In the regression model using insurance (model 3 in table 4), international diversification is positively related to penetration and ROA, whereas institutional ownership, size and leverage are insignificant. The result do not support hypothesis 2. It is possible that insurance ownership constitutes only a small part of the total institutional holding and their influence might be limited. In any case, insurance companies tend to focus on fixed income securities. Therefore, a better test of this hypothesis will be to test it in firms issuing a high percentage of fixed income securities and also possessing high levels of institutional holdings with insurance firms as the primary institutional investors. However, that is outside the scope of this paper.
### Table 4. International diversification by institution type

<table>
<thead>
<tr>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficient</td>
<td>p-value</td>
<td>Coefficient</td>
<td>p-value</td>
</tr>
<tr>
<td>Constant</td>
<td>0.17**</td>
<td>0.00</td>
<td>0.91***</td>
</tr>
<tr>
<td>Institutional ownership</td>
<td>0.05***</td>
<td>0.00</td>
<td>-0.13***</td>
</tr>
<tr>
<td>Size</td>
<td>-0.02***</td>
<td>0.00</td>
<td>-0.09***</td>
</tr>
<tr>
<td>Leverage</td>
<td>-0.14***</td>
<td>0.00</td>
<td>-0.34***</td>
</tr>
<tr>
<td>Penetration</td>
<td>3.21***</td>
<td>0.00</td>
<td>3.43***</td>
</tr>
<tr>
<td>ROA</td>
<td>0.16***</td>
<td>0.00</td>
<td>0.47***</td>
</tr>
<tr>
<td>No. of observation</td>
<td>7849</td>
<td>1109</td>
<td>198</td>
</tr>
<tr>
<td>R² (%)</td>
<td>94.2%</td>
<td>97.4%</td>
<td>97.3%</td>
</tr>
<tr>
<td>Adjusted R² (%)</td>
<td>94.2%</td>
<td>97.4%</td>
<td>97.3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model 5</th>
<th>Model 6</th>
<th>Model 7</th>
<th>Model 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficient</td>
<td>p-value</td>
<td>Coefficient</td>
<td>p-value</td>
</tr>
<tr>
<td>Constant</td>
<td>0.08</td>
<td>0.20</td>
<td>0.65***</td>
</tr>
<tr>
<td>Institutional ownership</td>
<td>-0.25***</td>
<td>0.00</td>
<td>0.21***</td>
</tr>
<tr>
<td>Size</td>
<td>-0.02</td>
<td>0.08</td>
<td>-0.09***</td>
</tr>
<tr>
<td>Leverage</td>
<td>-0.01</td>
<td>0.31</td>
<td>-0.24***</td>
</tr>
<tr>
<td>Penetration</td>
<td>3.65***</td>
<td>0.00</td>
<td>4.40***</td>
</tr>
<tr>
<td>ROA</td>
<td>-0.42***</td>
<td>0.00</td>
<td>0.09***</td>
</tr>
<tr>
<td>No. of observation</td>
<td>1550</td>
<td>4936</td>
<td>1307</td>
</tr>
<tr>
<td>R² (%)</td>
<td>97.5%</td>
<td>93.9%</td>
<td>97.3%</td>
</tr>
<tr>
<td>Adjusted R² (%)</td>
<td>97.5%</td>
<td>93.9%</td>
<td>97.3%</td>
</tr>
</tbody>
</table>

*, **, ***: significant at the level of 5%, 1% and 0.1%

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- ROA is net income divided by total assets at the end of the year.
In the regression model that uses mutual funds (model 4 in table 4), international diversification is positively related to institutional ownership, size, penetration and ROA. The result supports hypothesis 3, which states that mutual fund ownership is positively associated with international diversification. Mutual funds tend to invest in firms with international diversification for short-term and positive returns. This result also supports previous studies (Zahara, Neubaum & Huse 2000; Tihanyi et al. 2003). When firms with mutual fund investments have a large size, penetration and ROA, they have more international diversification. International diversification is negatively related to leverage because firms with high leverage are considered to be risky. Therefore managers avoid taking additional risk through international diversification. Even though the leverage variable has the correct sign on the coefficient, it is not significant.

The regression model involving brokerage firms (model 5 in table 4) indicates international diversification is negatively related to institutional ownership and ROA. The result does not support hypothesis 4, which asserted a positive relationship. International diversification is positively related to penetration. Size and leverage are insignificant. It is possible that brokerage firms help hospitality firms make an equity offering or issue bonds. Thus they are more likely to be interested in domestic investment rather than international investment.

In the regression model using pension funds (model 6 in table 4) institutional ownership is positively related to international diversification, thus hypothesis 5 is supported. As pension funds have a long-term horizon in the lodging industry, large holdings of pension funds will predict better long-term performance in restaurant internationalization (Chen et al. 2007). International diversification is positively related to penetration and ROA and negatively related to leverage and size. When domestic market for the restaurant is penetrated, sample firms with pension fund investment diversify internationally. Sample firms with high leverage have lower international diversification.

Model 7 reports the results of combining the two groups that are considered pressure sensitive, banks and insurance firms. International diversification was significantly negatively related to the holdings of these two types of firms, which was as predicted. Model 8 reports the results of combining the three groups that are considered pressure resistant, pension funds, mutual funds, and brokerage firms. International diversification was significantly positively related to the holdings of these three types of pressure resistant institutional holdings, again which was as predicted.

Conclusion

Among five hypotheses about the relationship between institutional ownership and international diversification, three hypotheses were supported. Investments by pension funds and mutual funds lend support to international diversification of restaurant firms. Whereas, bank investments in restaurant firms leads to lower international diversification. Hypotheses related to brokerage and insurance firms are not supported. As we indicated earlier, the non-significance of these two groups might have been from low holdings. Ownership holding by brokerage firms had a significantly negative impact on international expansion. Insurance ownership was not significant to international diversification.

This study investigated internationalization decisions by institutional ownership. We provide evidence that suggests that restaurant firms are sensitive to needs of institutional firms that invest in their stocks. In other words, operational strategy is influenced by who owns the stock. Clearly this is a very interesting result because it provides a context in which restaurant firms are likely to diversify abroad. However, it also gives rise to some interesting questions. If a firm has saturated the domestic market and wants to diversify abroad, but the majority of stock holdings is by pressure sensitive institutional investors. Will this firm now be constrained by the ownership or continue towards the path of international diversification? If it does diversify abroad then would there be a change in the nature of stockholding in the firm? Finally, this study has only provided evidence on the
relationship between institutional holding and international diversification; future result may throw more light on the
directionality of the relationship, whether the decision of international diversification drives the kind of institutional
investors in the firm or the other way around. Finally, we also believe that there might be other corporate decisions
that are influenced by the structure of institutional ownership. Future research may shed more light on this issue.

Reference

hospitality industry: structure, characteristics and issues.”


Management Journal, 14, 15-32.


http://phx.corporate-ir.net/phoenix.zhtml?c=119205&p=irol-sec


Accounting Research 18, 207-246.

279-305.

http://investor.darden.com/financials.cfm

David, P., Hitt, M. & Gimeno, J. (2001) The role of institutional investors in influencing R&D, Academy of
Management Journal 44, 144-157.

compensation, Academy of Management Journal 41, 200-208.


1343.

Management 31, 210-233.


global perspective, Journal of Applied Finance 13, 4-22.

Graves, S. & Waddock, S. (1990) Institutional ownership and control: implication for long-term corporate strategy,
Academy of Management Executive 4, 75-83.

Hall.

2374.


Hua, N. & Upneja, A. (2007) Going international? Important factors executives should consider!, International
Journal of Contemporary Hospitality Management 19, 537-545.


Technomic Inc. (1998) Update of analysis of the 100 largest US chain restaurant companies, Technomic Information Services, Chicago, IL.

