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PLURAL FORM,RISK AND PERFORMANCE IN THE HOTEL INDUSTRY

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Introduction

A hotel firm entering a new market or expanding its business must always choose among owning, operating, or franchising a new unit. A firm that franchises (i.e., a franchisor) grants the use of a brand name to owners (franchisees) of hotel properties that the firm neither owns nor manages. Franchisees operate the hotels and pay royalty fees that are typically equal to a percentage of gross sales. A firm engaged in business management provides professional and comprehensive operations support to lodging properties owned by a third party in exchange for management fees that are equal to a percentage of gross sales and possibly incentive fees. Management contracts and franchising agreements have become very popular as means of enabling firms to achieve rapid growth, increase their probability of survival and gain access to capital at lower risk, compared to full-ownership (Combs, Ketchen Jr, & Hoover, 2004; Shane, 1998).

In this study, use of “the plural form” refers to the adoption of a multiple-distribution strategy: franchising, management and full ownership. Since each of these types of business has both benefits and drawbacks, none can be called the best. Researchers have suggested that the plural form can help a firm to improve its consistency, efficiency, control, flexibility and responsiveness to market demands (Brookes & Roper). The plural form gives firms better opportunities in the market and enables both property owners and operators to grow (Bradach & Eccles, 1989). Firms with the plural form can overcome financial or managerial resources constraints or allocate their resources to a better alternative available for investment (Carney & Gedajlovic, 1991). The plural form also enables firms to optimize profits and reduce risks by franchising units that are unprofitable or in uncertain markets and owning profitable units (Ehrmann & Spranger, 2007). Plurally organized firms, that is, firms that conduct business through simultaneous franchising, management and full-ownership, tend to compensate for losses incurred by employing one of these types of business with profits made by implementing another. Accordingly, the plural form is less risky, especially in uncertain and dynamic environments, and outperforms single business strategies, in terms of overall profitability (Ehrmann & Spranger, 2007).

Previous studies have examined the distribution of franchised units and company-owned units, the relationship between franchising and performance (Combs, Ketchen, Shook, & Short, 2011; Ehrmann & Spranger, 2007; Hsu & Jang, 2009; Shane, 1998) and the superiority of the plural over the pure form, which is defined as the use of a single business strategy (Ehrmann & Spranger, 2004; Perrigot, Cliquet, & Piot-Lepetit, 2009). While a large body of research has focused on franchising, researchers have been silent on the impacts of management contracts on firms. No previous studies have attempted to determine the percentage of firms employing business management, although management is very commonly adopted by hotel firms. Consequently, we still have no conclusive understanding of the benefits of employing different proportions of franchise, management, and ownership strategies in property portfolios.

Agency theory, risk sharing and portfolio theory conceptually suggest that the plural form, especially when this includes franchising and/or management, is a way of reducing a firm’s risk. However, risk has been largely ignored in empirical studies thus far; few studies have

provided evidence that franchising, management or full-ownership reduce a firm's risk. Additionally, the lodging industry has received less attention than other fields, although franchising and management have contributed significantly to the growth of major hotel chains since the 1960s. Therefore, this study aims to examine: 1) the superiority of the plural form over single forms, in terms of both risk and performance in the hotel industry; and 2) the impacts of different proportions of franchising and management in business portfolios on a firm's overall risk and various performance variables, where we expect curvilinear relationships.

Literature Review

Franchising and management are the dominant distribution strategies used by hospitality firms to grow. Many hotel firms employ multiple business forms simultaneously: managed units are operated by firms that do not own those units, franchised units are operated by franchisees with ownership, and owned units are operated by firms with ownership. A portfolio that includes each of these forms of business is referred as the plural form (Jeffrey L Bradach & Eccles, 1989). Business ownership is typical during the first stage of business (Oxenfeldt & Kelly, 1969). Then, firms tend to expand through franchising and/or management. A management contract is an agreement between a hotel firm (operator) and a property owner, in which the firm is responsible for managing the property in a professional manner (Dave, 1984). Franchising is defined as long-term, continuous relationship where owner of a product, process or service (i.e., the franchisor) licenses someone else (i.e., the franchisee) to use this product, process or service in exchange for some sort of payment (Khan, 1992).

Diversification is a strategic option that many managers use to improve their firms' performance and avoid risk. From the portfolio theory perspective (Markowitz, 1952), hotel firms having more-diversified businesses can reduce business risk more than hotel firms with less-diversified businesses. Since the plural form is a strategy that allows firms to create value using multiple business forms, it can be seen as representative of diversification. Having a diversified portfolio of hotel properties lowers business risk and the probability that a firm will experience poor performance by smoothing out performance fluctuations (Salter & Weinhold, 1979). Both franchising and management enable firms to conserve capital for other investments, to grow quickly and to reduce a considerable portion of their cost burdens, including initial fixed costs and ongoing operating expenses at the unit level (Sorenson & Sørensen, 2001). Although franchisees are supposed to meet the standards specified in contracts and tend to follow firms' directions, franchises are often less effective at controlling the quality of products and services and implementing product innovations in franchised units. Moreover, firms can extract more profit from company-owned units, in terms of dollar amounts, than franchised or managed units. Thus, once the terms of a contract expires, franchisor firms often buy back successful franchised units (Ehrmann & Spranger, 2007).

The benefits and drawbacks of franchising, management and ownership indicate that the combination of these three forms give firms better opportunities to achieve competitive advantages than any one of these forms alone. Plurally-organized forms compensate for the losses made under one form with profits from another form, resulting in lower risk and more profits. Combining franchising, management and ownership strategies (i.e., employing the plural business model) may enable firms to reduce agency problems, use their resources more

effectively by allocating them to more profitable units, balance the efficiency and the quality of products, reduce risks associated with uncertainty in some geographical regions and lower sensitivity to risk by making dramatic changes in external environmental conditions (Bürkle & Posselt, 2008; Ehrmann & Spranger, 2007; Shane, 1998). Expecting the superiority of the plural form over the pure form, the following hypotheses are proposed:

H1: Firms with plural structures and firms with singular structures have different levels of risk.

H2: Firms with plural structures and firms with singular structures perform at different levels.

Resource scarcity theory, agency theory and risk sharing theory are often used to explain the reasons behind a hotel company's franchising or management decisions and the possible consequences of these distribution strategies. From the agency theory perspective, franchising is a response to classic principal-agent problems. Agency theory explains the relationship between principals and agents in business, which occurs when one party (i.e., the principal) hires another party (i.e., the agent) to do business on the principal's behalf. In such a relationship, agency problems arise when the principal and agent have different interests, desires or goals. Within a hotel firm, agency problems arise when a hotel firm and the employee managers of the firm's hotels have different interests or goals. Agency theory explains how franchising can reduce such agency problems as moral hazard and adverse selection and the agency costs of controlling managers' activities (Lafontaine, 1992). The benefit of franchising occurs by offering to others the option to own and operate a unit, instead of hiring employee managers to maintain the unit (Diaz-Bernardo, 2012). Franchisees are owners of their businesses and generally share with franchisors the goal of maximizing the value of their businesses. A hotel firm's propensity to use franchising can reduce the monitoring problems and costs that sometimes occur when hotels are company-owned and managed by a manager hired by a firm.

From a resource scarcity perspective, franchising is primarily a means of accessing the scarce capital and managerial resources needed to open a new unit. Oxenfeldt and Kelly (1969) have suggested that firm franchises alleviate scarce resources by making accessible managerial expertise, local market knowledge and capital. Lack of capital and managerial resources is a major obstacle to rapid expansion. Franchising allows franchisors to advance their growth and market penetration quickly. Carney and Gedajlovic (1991) have suggested that elements of resource scarcity theory and agency theory are important to explaining why firms decide to enter into franchising.

Risk-sharing theory suggests that management and franchising arise from the need to share risk or transfer part of a firm's risk to another party (Lafontaine, 1992; Lafontaine & Bhattacharyya, 1995). According to this theory, franchising and management help both firms and owners of properties share the risks of business. Franchisees and owners of managed units reduce their business failure rates by using well-established concepts, and firms lower the business risk associated with fixed costs and the volatility of operating expenses at the unit level. Both franchising and management rely on access to other parties' capital. As such, franchising and management models lower the cost of fixed investment capital for firms and accordingly lessen business risk. In addition to fixed costs, firms are not responsible for most expenses related to hotel operation, since their cash flow typically depends on sales-based fees. In this sense, the risks associated with the volatility of operating expenses can be buffered by

simultaneously employing franchising and management strategies, which can reduce variability in firm performance. Linking risk-sharing theory to agency theory, Brickley and Dark (1987) have found evidence that firms tend to avoid agency-related risks by franchising properties that have high employee-monitoring costs. Using variance of sales and variance of cash flow, Martin (1988) and Roh (2002) have examined whether franchisers rely on franchising to reduce risk and concluded that higher proportions of franchised units are related to lower business risk.

Theoretically, from the agency, resource scarcity, risk sharing and plural form perspectives, franchised and/or managed units are supposed to lower costs, improve growth and reduce business risk, compared to wholly-owned units (Ehrmann & Spranger, 2007). The empirical results of previous studies support the notion that franchised units are superior to company-owned units when it comes to generating profit. Using a strategic group approach, Combs et al. (2004) found that restaurant firms that franchised in response to agency-based concerns outperformed firms that franchised in response to resource scarcity. Sorenson and Sørensen (2001) found that the optimal mix of units for outperformance depends on different degrees of geographic dispersion. Although differences in level of performance depended on the extent of environmental heterogeneity encountered by the restaurant chains in their study, in general, restaurant chains that combine franchising and company-ownership performed best under all conditions. Hua and Dalbor (2013) also provided empirical evidence for the restaurant industry where franchising is an effective mechanism to consistently outperform non-franchise firms in the long-term. Some researchers like Bradach (1997) and Lewin-Solomons (2000) suggest the a non-linear relationship between the efficiency of franchising and company ownership. In hospitality research, Koh, Lee, and Boo (2009) and Hsu and Jang (2009) proposed that the relationships are curvilinear or polynomial, considering both the benefits and drawbacks of the plural form (Ehrmann & Spranger, 2007). They provided evidence of the non-linear relationships between franchising and performance, as measured by return on assets (ROA), return on equity (ROE) and Tobin's Q. Hsu and Jang (2009) have found an inverted U-shaped relationship that indicates the proportion of franchised units deemed optimal to maximize the profitability and intangible value of restaurant firms.

Research on the plural business model tends to examine the efficiency of franchised and company-owned units and does not consider such other forms of business as management, licensing and joint venture. Management contracts, in particular, are very popular in the lodging industry. Hence, hotel managers need guidelines on how to make key decisions when entering into new markets or expanding their distribution. Management contracts lie between franchising and company-ownership (Sorenson & Sørensen, 2001), and a balance of franchising, management and ownership strategies is believed to be most beneficial to hotel firms, since each of these approaches has distinctive benefits and drawbacks. Management contracts are similar to franchise agreements, in that firms with management contracts provide such services as brand development, reservation system management and fee collection over the terms of their contracts and are not responsible for initial capital investments, working capital and operating expenses. However, firms under management contracts provide most daily managerial, operational and technical support, while firms under franchise agreements heavily rely on franchisees' resources and capabilities (Dev, Erramilli, & Agarwal, 2002). According to Dev et al. (2002), the presence of unreproducible resources and capabilities and the availability of qualified local investment partners make management more attractive than franchising. Another deficit in empirical

research is the importance of risk when explaining the consequences of franchising, management and ownership. While researchers have empirically found that risk is the primary cause of firms' choices to franchise or pursue management contracts, the development of risk as a consequence of the use of franchising and management strategies has been largely ignored by previous studies. Based on our review of the literature and the need for further exploration of management and risk, we hypothesize:

H3: The relationship between the proportion of franchised outlets and a firm's risk is inversely U-shaped.

H4: The relationship between the proportion of managed outlets and a firm's risk is inversely U-shaped.

H5: The relationship between the proportion of franchised outlets and a firm's performance is inversely U-shaped.

H6: The relationship between the proportion of managed outlets and a firm's performance is inversely U-shaped.

Methodology

Sample and Data

This study investigates whether firms that do business through multiple forms (i.e., a mix of franchising, management, and ownership) are less risky and perform better than firms with a single form. It also examines the impacts of franchise proportion and management proportion within the plural form. The sample consists of all hotel firms that have available data on 10Ks or annual reports from 2002 to 2012. The sample includes a set of firms that meet the following criteria: firms are publicly traded at any time from 2002 to 2012; they are classified as hotels (except casino hotels) and motels by the North American Industry Code System (NAICS) 721110; and they have franchise, management, and ownership information available during the study period. Fifty-nine hotels are initially listed. Then, we filter these 59 hotels through the aforementioned criteria, which yields seven non-gaming hotels and 67 firm-year observations. Due to data availability constraints and the resulting small sample size, the results must be interpreted with caution. The accounting, market, and property data are collected from 10Ks, Yahoo Finance, and the St Louis Federal Reserve. Sample is split based on the plurality of their units. Specifically, the firms that are made up of a mixture of franchised, managed, and wholly owned/operated units are in the plural form group and the firms that have only a single form of units – either franchised, managed or wholly owned/operated units are in the single form group. In the sample, franchising is the type of business form when a single form is used; no firm-year observations where properties are 100% managed or 100% wholly-owned.

Independent Variables

Franchise, management, and ownership. Lodging firms operate primarily under franchise, management, and/or ownership business forms. To measure the extent of the use of each form, the proportion of units (i.e., properties) under each form is used. Specifically, a franchising variable was measured by dividing the number of franchised units by the total number of units within a firm's system. A management variable was measured by dividing the number of

managed units by the total number of units within a firm's system. An ownership variable was measured by dividing the number of wholly owned and operated units by the total number of units. The franchise, management, and ownership variables indicate the relative focus of each business form. These measures are chosen based on the measures used in previous franchising research. Researchers have measured firms' use of franchising by calculating the percent of franchised units (Brickley & Dark, 1987; Hsu & Jang, 2009; Koh et al., 2009; Shane, 1998), the ratio of franchised to company-owned outlets (Shane, 1996), the percent of sales from franchised outlets (Michael, 1996), or dummy variables. Among these measures, the percent of franchised units is known to have high validity, because their operational definitions are very closely linked to their construct definition (Combs & Ketchen, 2003). Most hospitality researchers have used a dummy variable or a percent of the franchised outlets. These studies do not consider the management in their analyses, and usually examine differences between franchise and ownership. To our knowledge, there is no study that empirically examines management, so we compute management variables by using the same method of franchising calculation. We compute and use the percent of franchised, managed, and owned units in this study.

Control Variables

Firm size. Firm size was included as a control variable, because it tends to influence a firm's performance and risk. Many researchers have considered firm size an important feature that demonstrates a firm's characteristics, and they believe it has a strong relationship with firm performance or risk. It is known that as firm size increases, the level of risk decreases. Larger firms are likely to have a greater variety of capabilities and these capabilities often help operations to respond more effectively and efficiently to changes in a firm's external and internal environments. Chauvin and Hirschey (1993) pointed out that large firms make advertising and R&D more profitable, so they enjoy economies of scale, which in turn can help them to perform better. Size is often considered a proxy for available resources and thus an indicator of a firm's ability to resist external pressure from the general environment (Meznar & Nigh, 1995). Size in this study is measured by the log of total assets, which is one of the common methods of measuring firm size.

Leverage. This study included leverage as another control variable to account for the impact of leveraging on a firm's risk and performance. Leverage serves as a proxy for the probability of default. Interest and principal payments are obligations that can cause financial distress. Therefore, investors perceive highly leveraged firms as risky, because a highly leveraged firm is more vulnerable to financial distress. Such firms have limited slack resources and tend to be less able to exploit changes in their strategic position and less able to respond to changes in external environments. According to Modigliani and Miller (1958) capital-structure irrelevance proposition assuming no taxes and no bankruptcy cost, a firm's relative proportions of debt and equity don't matter for a firm's value. However, in reality, the cost of equity and the cost of debt are influenced by a firm's dependency on debt financing due to shareholders' perception of the riskiness of leveraged firms, bankruptcy costs, and tax savings from the interest tax deduction. Ultimately, this perspective suggests that leverage influences the cost of capital and ultimately changes the value of the firms. Leverage is measured in this study by dividing long-term debt/total assets.

Market condition. This study also controls market condition because a firm's risk and performance is influenced by external environments, especially economic conditions. The measure of general market conditions utilized is the market excess return, measured (Hua & Upneja, 2007) by the return on Standard and Poor's Composite Price Index minus the three-month Treasury bill rate.

Dependent variables

Risk and performance. We attempt to examine whether a firm's risk and performance are influenced by the firm's mix of business forms. Therefore, the dependent variables that we select for this study are a firm's overall risk and performance. A firm's risk is measured by the standard deviation of the firm's monthly stock return. A firm's performance is measured with profitability variables (i.e., return on asset and cash flow per share) and hotel industry variables (i.e., RevPAR and occupancy). Multiple performance measures are used in this study, because consistent evidence across the different performance measures allow us to confirm the relationship and different levels of impacts enable us to better capture the relationship. Return on assets (ROA), as measured by dividing net income by total assets, explains how efficiently a firm is using its assets to generate earning. Cash flow per share (CFPS) is measured by taking operating cash flow, subtracting the preferred dividends, and dividing by the number of outstanding shares. Some researchers believe cash flow is a better measure of a firm's performance due to the fact that measures using earnings can be more easily manipulated. We also include two hotel industry performance measures: RevPAR and occupancy. These are measured by the ratio of a hotel's output to its input. Occupancy and RevPAR are very commonly used as representatives of productivity measures in the lodging industry. Under the franchise form, a firm (franchisor) collects franchising fees including an initial fee and continuous fees. Continuous fees such as a royalty fee, a reservation fee, an advertising or marketing fee, and a frequent traveler fee are paid periodically over the term of the agreement. Under the management form, firms generate management fees from managed units. The fees include a base fee, which is a percentage of the gross revenue of the managed units and an incentive fee, which is a percentage of operating income. Firms that conduct business through wholly owned and operated units collect all the revenue, but have fixed capital investments and operating costs at the unit level. The different revenue sources and cost structure can create differences among the four performance measures and a firm's overall risk.

Data Analysis

This study employs independent samples t test to compare the risk and performance measures between the plural form group and the single form group. Then, using only the data of firms that do businesses through the plural form (i.e. the plural form group), we perform five sets of hierarchical regression analyses to test hypotheses three, four, five, and six. These analyses aim to examine the specific effects of the independent variables on the dependent variables while controlling for a firm's leverage, size, and market condition. By hierarchically adding higher-order terms into the analysis, we examine the R^2 change at each step to see if the inclusion of the higher-order terms accounts for more variance. In the regression model, ownership % is excluded, because it is highly correlated with the change in management (corr=.89, $p < .001$) %. Its inclusion causes multicollinearity in the model, which implies the lodging firms' tendency to

convert owned units into managed or franchised units or vice versa, rather than a tendency to convert managed units into franchised units or vice versa. The quadratic functions for testing curvilinear relationships are expressed below:

$$\text{Risk} = \beta_0 + \beta_1 \text{Franchise \%} + \beta_2 (\text{Franchise \%})^2 + \beta_3 \text{Management \%} + \beta_4 (\text{Management \%})^2 + \text{Controls} \dots\dots\dots (1)$$

$$\text{Performance} = \beta_0 + \beta_1 \text{Franchise \%} + \beta_2 (\text{Franchise \%})^2 + \beta_3 \text{Management \%} + \beta_4 (\text{Management \%})^2 + \text{Controls} \dots\dots\dots (2)$$

We hypothesized that β_2 is negative in both equation (1) and (2), implying that the franchise % has an inverted U-shaped relationship with a firm’s risk and performance. We also hypothesized that β_4 is negative, implying that the management % has an inverted U-shaped relationship with a firm’s risk and performance. Linear terms are entered first, followed by a model that includes both linear terms and quadratic terms.

Results

To test hypotheses one and two that the level of risk and performance differs between firms with a plural structure and firms that focus on a single form, the sample is split into the plural form group and the single form group, based on the plurality of property portfolios. The results of the independent samples t test indicate that firms with a plurality of business forms have significantly different levels of risk and performance, supporting hypotheses one and two (Table 1). Firms with plural form are less risky and generate higher performance than firms with a single form of business. The mean difference in risk is .0461. The mean differences in ROA, CFPS, RevPAR, and Occupancy between the plural and single form are -.0279, -.3379, -45.6019, and -7.9761, respectively. Our results show that lodging firms seem to experience the positive impacts of the plurality of business form and this finding is consistent with previous research. Additionally, the firms with a single business form focus on franchise rather than management or ownership.

Table 1.

Comparison of Risk and Performance between a Plural Form and a Single Form

	Plurality	Mean	Std. Deviation	Mean Difference	T
Franchise %	Single	1.00	0.09	0.36	8.99***
	Plural	0.53	0.23		
Management %	Single	0.00	0	-0.3	-10.11***
	Plural	0.3	0.19		
Ownership%	Single	0.00	0.01	-0.18	-4.97***
	Plural	0.18	0.25		
Risk	Single	0.12	0.12	0.05	2.02*
	Plural	0.08	0.06		
ROA	Single	0.03	0.03	-0.03	-2.574***
	Plural	0.05	0.05		

Cash flow per share	Single	0.04	0.038	-.34	-7.40***
	Plural	0.38	0.29		
RevPAR	Single	49.07	16.79	-45.6	-6.268***
	Plural	94.67	36.87		
Occupancy	Single	57.96	6.3	-0.08	-5.142***
	Plural	65.94	5.48		

*p<0.05; ** p<0.01; *** p<0.001

Table 2 presents the results of our tests on hypotheses three to six. The model for testing whether the risk is related to franchise% (F%) and management % (M%) produces a statistically significant result when using a linear relationship ($R^2=.53$, $F=4.71$, $p<.01$). The coefficient of M% in the model is not statistically significant whereas the coefficient of F% is. The prediction is not statistically improved with the quadratic equation at the .05 level of significance, so hypotheses three and four which predict curvilinear relationships are not supported.

With respect to a firm's performance, most performance measures are related to F% or/and M%. The models with the linear terms of F% and M% demonstrate that the variance in ROA is significantly explained by franchised % and management % ($R^2=.66$, $p<.01$) and that the variance in REVPAR is significantly explained only by management %. However, the linear terms of F% and M % do not explain the variance in CFPS and OCC. The models with both the linear and the quadratic terms of F% and M% are proven to have incremental improvement in their prediction of CFPS, REVPAR, and OCC, because the quadratic terms account for more variances in CFPS, REVPAR, and OCC ($\Delta R^2=.26$, $.03$, $.16$, $\Delta F=12.68$, 5.20 , 14.43 , $p<.01$, $.05$, $.01$, respectively) than linear terms do. The coefficients of squared F% are statistically significant at the .05 level, but the regression coefficients of squared M% are not statistically significant at this level.

As shown in Table 2, the franchise percentage has a negative linear relationship with a firm's overall risk, suggesting the franchise % in a firm's system reduces the level of the firm's overall risk as it increases. However, the results of our analysis do not support the curvilinear relationship that this study's hypothesis three predicts. Moreover, the management percentage is not related to a firm's risk at all, controlling for franchise percentage, size, leverage, and market condition. The findings suggest the existence of an inverted U-shaped relationship between the proportion of franchised units and the lodging firm's performance (i.e., CFPS, REVPAR, and OCC), supporting hypothesis five. However, hypothesis six which states that the relationship between the proportion of managed outlets and a firm's performance is inversely U-shaped is not supported. The relationship is linear. Management percentage positively affects ROA and REVPAR, whereas CFPS and OCC are not related to management percentage. These relationships are summarized by the graphs in Figure 1.

The control variables are either not statistically significant or only marginally significant. LEVERAGE is not an influential factor on a firm's performance and risk at a .05 level of significance. A firm's SIZE was positively related to the ROA, and MKT is positively related to REVPAR and OCC. The control variables used in the study are commonly used control variables for studying performance or risk, but our results demonstrate somewhat different relationships from those found in previous literature. Our insignificant control variables might have resulted

from multicollinearity or small sample size. The variance inflation factors (VIFs) in the regression models range from 1.088 to 8.748, so they are within the acceptable range (as a rule of thumb, VIFs of 10 or higher indicate multicollinearity concerns). The sample size in this study is small, because few lodging firms report specific information about business forms, especially information about managed properties. Thus, low power due to the small sample size could have led to our insignificant control variables.

Table 2.

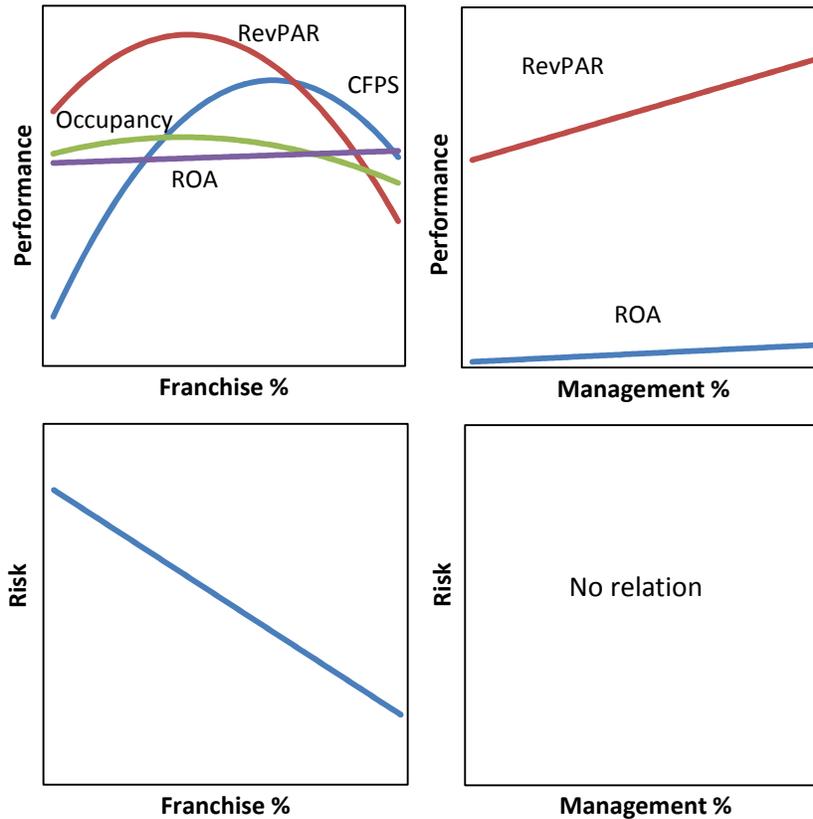
Results of Hierarchical Regression Analysis

Independent Variables	Dependent Variables									
	Risk		Performance							
	Overall risk		ROA		Cash flow per share		RevPar		Occupancy	
	β		β		β		β		β	
Constant	.088	-.048	.07	.21	-2.44	-3.96	2.58	1.26	.53	.28
Franchise %	-.22**	.51	.31**	-.21	-.71	19.07**	.49	10.17**	.07	2.29**
Management %	-.02	-.18	.21**	.63**	1.72	3.22	1.28**	.01	.13	.05
(Franchise %) ²		-.57*		.42		-14.89*		-12.81*		-3.00**
(Management %) ²		.37		-.72		2.71		3.86		.64*
Firm's leverage	.13	.08	-.07	-.09	1.88	-1.31	.49	.47	-.02	-.04
Firm's size	.01	-.01	.02**	.02**	.42	.13	.12	.06	.01	-.02
Market excess returns	-.02	.05	-.02	-.03	.39	-.43	.30*	.38**	.04	.07**
R ²	.53	.63	.66	.69	.51	.77	.91	.94	.77	.93
F	4.71**	4.46**	9.58**	7.45**	5.05**	10.74**	39.75**	45.76**	10.10**	24.25**
ΔF	2.35*		1.38		12.68***		5.20**		14.43***	
ΔR^2	.10		.04		.26		.03		.16	

* p<0.05; ** p<0.01; *** p<0.001

Figure 1.

Relationships between Franchising Proportion, Management Proportion, Risk, and Performance



Discussion and Conclusion

Firms in the hotel industry have actively chosen between owning, franchising, or managing hotel properties. Many researchers and practitioners have believed, the mix of different business forms (i.e., plural form) is superior to the single form in terms of a firm's risk and performance. Firms with plurally organized chains are likely to be less risky and gain higher performance than firms with purely franchised, purely managed, or purely owned/operated units. This study provides evidence to support this belief, showing differences in risk and performance between the two groups of firms. A firm can create a plurality of business forms through its continuous efforts to select the best business form for the current situation that the firm faces. Therefore, the plural form allows firms to outperform firms with a single form. According to the portfolio theory (Markowitz, 1952), hotel firms with more diversified businesses reduce their business risks more than hotel firms with less diversified ones. Firms that create value through multiple business forms could represent more diversification and are therefore less risky. Diversification through the combination of business results through multiple forms lowers risk

and smoothes out performance fluctuation. Thus, diversification reduces the probability a firm will experience a very low performance.

This study further examines the potential curvilinear relationship between each form's proportion and the firm's performance measures as well as between each form's proportion and the firm's overall risk within the US lodging industry. The findings suggest that the proportion of franchising has a negative linear relationship with a firm's risk, no type of curvilinear relationship with a firm's risk. On the other hand, we find that the proportion of managed units in a firm's system has no significant relationship with a firm's risk. Our findings support a risk-sharing approach to franchising that assumes that franchising helps both franchisor and franchisee to share the risk of business. Franchisees reduce their business failure rates by using well-established concepts and the firms (i.e., the franchisors) lower the business risk that is associated with fixed costs and the volatility of operating expenses at a unit level. It would be also easier to monitor and predict gross sales than profits and accordingly firms may plan better for the future. Thus, the increase in franchise percentage in the portfolio of hotel properties can lead to a decrease in a firm's overall risk. Under the management form, hotel firms operate properties under management agreements with property owners. Management contracts are generally more complex than franchise agreements, and are often influenced by the property owner's voice and by the contract terms offered by competitors. A limited market and growing competition among management firms to enter into new contracts give property owners stronger bargaining power during the negotiation process. The recent proliferation of private equity firms as hotel owners produces even more pressures on management firms to offer shorter initial terms and more renewal options (Bader & Lababedi, 2007). Like franchising, management contracts offer advantages to hotel firms by collecting the base fees according to the gross sales of units and avoiding fixed capital investments. However, this unfavorable circumstance might adversely affect firms that heavily rely on managed units and offset the positive impacts on a firm's risk.

Similar to the results of previous studies, we confirm the existence of an inverted U-shaped relationship between the proportion of franchised units and lodging firm performance. This study also suggests that the proportion of managed units has a positive linear relationship with a firm's performance. This study employs two profitability measures (i.e., ROA and cash flow per share) and two hotel industry measures (i.e., RevPAR, and occupancy) as performance indicators. Multiple performance measures are used mainly to see whether there is consistent evidence across the different performance measures. Moreover, although most financial performance measures are related to each other, they sometimes indicate different aspects of performance and managers may place emphasis on different indicators of performance. The negative coefficient of the squared term of franchise % suggests an inverted U-shaped relationship with performance measures such as cash flow per share, RevPAR, and occupancy. This means that an increase in franchise percentage improves a firm's cash flow per share, RevPAR, and occupancy while controlling for management proportion as well as a firm's specific factors (i.e., size and leverage) and market condition. This means that a hotel firm in its plural form can generate an initial increase in its cash flow per share, RevPAR, and occupancy by increasing its franchise percentage. However, after a certain level of franchise percentage, a decrease in these performance variables is likely to occur, indicating that the drawbacks of franchising might outweigh the benefits at higher levels of franchising. These findings are consistent with Bradach (1997) and Lewin-Solomons (2000)'s arguments about a non-linear

relationship between the efficiency of franchising and company ownership and empirical results of Hsu and Jang (2009)'s study. As Hsu and Jang (2009) suggest, the inverted U shape indicates the optimal proportion of franchised units. Under the franchise model, a firm is concerned about franchisee's free riding, where franchisees shirk on the brand name and do not provide the quality of products and services the firm expects. As the number of franchised units increases, it would be difficult and expensive for a firm to monitor the quality. Consequently, franchisees' poor or irresponsible operations may lead to dilution and destruction of brand equity. Another possible reason for the decrease after a certain point is an innovation challenge. Franchisees are likely to resist to implement new ideas that are related to increases in costs are risks. As the number of franchisees increase, it becomes relatively difficult for a firm to implement new ideas, leading to conflicts between a franchisor and franchisees.

Our study further suggests that the optimal proportion can vary according to the firm's emphasis on different performance measures. Firms that focus on hotel industry-specific performance such as RevPAR and occupancy have a lower level of optimal franchise proportion than firms focusing on cash flow per share. A franchise percent that is too high in the mix of business forms is likely to adversely influence some performance measures, because the firms might find it difficult to control the quality of products and services across so many franchises. Accordingly the franchised units may not experience the same levels of RevPAR and occupancy. The hotel's performance at the unit level will consequently lower the cash flow per share. In addition, another profitability measure, ROA, tends to have a positive linear relationship with franchise percentage, not a curvilinear relationship. These findings suggest that optimal franchise proportion in the plural form depends on a firm's interest in particular performance measures.

Our analysis does not show evidence that management proportion has an inverted U-shape relationship with all performance variables. Nevertheless, we do find that as management percentage increases, ROA and RevPAR increase while controlling a firm's size, leverage, market condition, and management proportions. This means the higher the proportion of management in a plural form, the better the ROA and RevPAR. The key difference between management and franchising is who operate the business at the unit level. In general, managers in managed units do what a firm asks them to do, so better management quality and expertise could be obtained, compared to those in franchised units. On the other hand, franchisees usually make operational decisions themselves to a great extent. As previously explained, too high franchising proportion of property portfolio is likely to make drawbacks (i.e., brand equity dilution and innovation challenge) of franchising outweigh its benefits. Under the management model, a firm is unlikely to face this situation.

In summary, this study aims to help hotel owners, operators, and researchers to understand better the impacts of franchising and management on a firm's overall risk and various performance variables. This study also demonstrates the superiority of the plural form over a single form. Specifically, we prove the plural form to be better improving performance and lowering risk than a single form. Furthermore, a plural form with a higher franchise percentage is more likely to reduce a firm's risk than other plural forms. In addition, a plural form with a higher management percent can increase ROA or RevPAR, but it does not change a firm's risk, cash flow per share, or occupancy. To our knowledge, this is the first study to examine how the plural form and each form's proportion influence risk. The results indicate that the optimal

proportion of franchising varies according to a firm's emphasis on a particular performance. The findings of this study could be utilized by lodging firms to understand the effect of the proportions of franchise, management, and ownership on the firms, before expanding their number of units in the market.

Limitations and Further Study

Although this study attempts to reveal the proper levels of the three different business forms in plurally organized hotel chains to improve performance and reduce risk, data availability constraints force us to limit our analysis of the relationships. We have reviewed all hotel firms that were publicly traded in the market, but many firms do not clearly report information especially information about managed units. We strongly encourage conservative use of our predictions due to the small sample size in this study. The data limitation might have also led to the small number of studies associated with the plural form in the lodging industry. Nevertheless, this topic should be an important research area, because franchising, management, or other forms of business have become central in strategic decisions by hotel firms. Another limitation is that this study could not consider some specific factors of hotel properties such as market segments and locations mainly due to the sample size. For example, location, market segment, or brands might influence the effect of the plural form on performance. For example, Dev et al. (2002) found that economy or mid-priced hotel brands have franchised units more than managed units, whereas luxury brands tend to have more managed units than franchised units to control the quality of their products and services. Considering the portfolio of brands could provide further insight into the plural form. Future research may also consider the relevance of various measures of risks to capture more of the impact of the plural form on the risk.

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