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Increased Interest Expense and Management's Expense Preference Behavior of Publicly-Traded Restaurant Firms

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Introduction and background

While the ultimate goal of firms should be to maximize profits, there is a conflicting view that some managers will exhibit expense preference behavior under certain circumstances. This behavior leads managers to spend money on items that are within their control to better their position monetarily instead of maximizing shareholder wealth.

Expense preference behavior can be a significant problem in the restaurant industry because restaurants only average approximately a 5 percent net income margin. This average was calculated based on COMPUSTAT data for all public restaurants in SIC code 5812 for 2000-2007. The majority of expenses in the restaurant industry fall into two main categories, cost of goods sold and labor. Cost of goods sold expense comprises food, beverage and paper costs for fast food restaurants, while labor expense includes payroll and benefits. These two expenses combined to average between 70 and 80 percent of sales for restaurants, varying depending on the type of restaurant with fast food restaurants on the lower end of the range. If interest expense increases and other expenses are not decreased, then the net profit margin will fall below the already low margin of 5 percent. Due to the already low profit margin and high food and labor costs, it is important that managers control and decrease other expenses as interest expense increases.

Upneja, Dalbor, and Hua (2008) analyzed the effect of federal interest rate changes on the interest expense of publicly traded restaurant firms. The purpose of this paper is to further evaluate the effect of interest rates changes on publicly traded restaurant firms by assessing whether or not managers adjust other expenses down as interest expense increases. If they do then they are not exhibiting expense preference behavior. To our knowledge, no previous study has been done on expense preference theory in the hospitality or restaurant industries.

The organization of this paper is as follows. The next section is a review of the expense preference theory literature. Data and methodology comprise the third section. This will be followed by results in section four and finishing with a conclusion and recommendations for further research.

Literature Review

Expense preference theory, as explained by Williamson (1963), states that managers of firms have a preference towards higher expenses rather than toward maximizing profits. These expenses are generally those for themselves and fall into the categories of staff size, salaries, discretionary compensation, and increased plant and equipment. There are differing views on not only whether managers exhibit expense preference behavior but also on whether this behavior is more prevalent in specific industries, market structures or firm structures over

other firms with similar characteristics. One of the ideas that has been analyzed is that highly regulated industries tend to be more expense driven than profit driven and that as deregulation occurs, competition increases and more competition leads to less expense preference behavior and more profit maximizing behavior (Gropper and Oswald 1996; Gropper and Hudson 2003; Mixon and Upadhyaya 1996).

The banking industry deregulation of the early 1980's completely changed the environment for the industry. The banking industry was highly regulated prior to this and with deregulation came removal of barriers to entry and increased competition. Gropper and Oswald (1996) studied the banking industry before and after this period of deregulation and analyzed not only personnel related expenses but also other operating expenses such as occupancy and equipment costs. The authors were not only testing whether expense preference behavior decreased as deregulation and competition increased, but they were also concerned with whether or not expense preference behavior effects other operating expenses. Williamson only looked at a limited number of expense types but Gropper and Oswald were concerned about a larger range to see if managers exhibited expense preference behavior in all expense categories not just personnel related. The results of this study show that after deregulation expenses decreased in all tested categories besides furniture and equipment, which showed a slight increase.

Gropper and Hudson (2003) also conducted a study of savings and loan companies during the same period since both commercial banks and saving and loan companies were affected by the deregulation. In this study the authors compared wages of savings and loan companies before and after deregulation and found that wages decreased as competition increased from deregulation.

The financial services industry was not the only regulated industry in which expense preference behavior was examined. Mixon and Upadhyaya (1996) analyzed firms in the trucking industry to see if there was expense preference behavior by those managers. Common carriers, which are highly regulated, were compared with less regulated contract carriers. Results showed that contract carriers were more inclined to not exhibit expense preference behavior as compared to common carriers. This is thought to be due to the regulation issues, with more regulation leading to more expense preference behavior.

Competition differences are not only evident in regulation levels, but also in market structures. Firms that operate in monopolistic or oligopolistic markets have no or little competition as compared to firms that operate in high concentration markets that have a lot of competition such as restaurants. Rhoades (1980) studied how market structure affects managers spending in the banking industry. The author found that managers in competitive markets were less inclined to exhibit expense preference behavior than those in monopolies. While

the study found that managers may seem to have expense preference in some expenses, overall expenses were lower in more competitive markets.

Awh and Primeaux (1985) came to a slightly different conclusion in terms of monopolies and duopolies. They found that in electric utility companies, monopoly firms actually spent less in sales and administrative expenses than did managers in duopoly firms. This goes against previous studies that have found that highly regulated industries with low competition are more expense driven than profit maximizing as compared to firms with less competition in the same high regulation industry. The study did show though that expense preference behavior can be absent in low competition, highly regulated industries.

The level of regulation and competition is important for this study because most restaurants are not highly regulated and are very competitive. The aforementioned studies have shown that as regulation decreases and competition increases, expense preference behavior by managers decreases. This is an important base to have as restaurants are evaluated for expense preference behavior since they operate in a competitive environment.

The organizational structure of firms has also been noted as a reason behind potential expense preference behavior. Hospitals have been analyzed to see if the organizational structure affects managers spending behavior. Oswald, Gardiner, and Jahera (1994) compared not-for-profit hospitals with proprietary hospitals for salaries and assets. Their results show that proprietary hospitals spent less on

salaries and capital expenditures than not-for-profit hospitals did. Since restaurants are for-profit firms also, this study helps build support for whether or not restaurants can be analyzed for expense preference behavior.

Hospitals were also evaluated in terms of another organizational structure that could affect expense preference behavior, management ownership (Dor, Duffy, and Wong, 1997). The authors of this study tested whether hospitals that moved from salaried managers to contract manager were more or less inclined to cost minimizing amounts of labor and capital. They found that contract managers exhibited less labor expense than the salaried managers they took over for due to the contracts stating financial improvement was a necessity for the contract to stay in place. This study also showed that just because a hospital was under contract that did not mean that the contract managers were cost minimizers in all expenses all the time.

Another potential reason for managers exhibiting expense preference behavior involves agency theory. Smirlock and Marshall (1983) analyzed a combination of banks and savings and loans and showed that being a monopoly in and of itself does not lead managers to expense preference behavior but instead agency problems, such as imperfect information and costly monitoring costs of contracts, do. Blair and Placone (1988) also found that agency costs were the reason for expense preference behavior. They evaluated 2,000 saving and loans institutions and found that neither the amount of competition nor the structure of

the organization was statistically significant in whether expense preference behavior was exhibited by managers. Table 1 summarizes this study and the other studies evaluated for this paper.

Table 1: Expense preference behavior findings

Author(s)	Date	Industry	Structure Evaluated	Expense preference findings
Gropper and Oswald	1996	Banking	Level of regulation	After deregulation expenses decreased, showing that less regulation led to less expense preference behavior
Gropper and Hudson	2003	Savings and loan	Level of regulation	After deregulation expenses decreased, showing that less regulation led to less expense preference behavior
Mixon and Upadhyaya	1996	Trucking	Level of regulation	Firms in less regulated markets, i.e. contract carriers, showed less expense preference behavior
Rhoades	1980	Banking	Amount of competition	Managers in competitive markets were less likely to exhibit expense preference behavior than those in less competitive markets
Awh and Primeaux	1985	Electric Utility	Amount of competition	Monopoly firms spent less in S&A expenses than those in duopoly firms

Oswald, Gardiner, and Jahera	1994	Hospitals	Organizational structure	Proprietary hospitals spent less in expenses than did not-for-profit hospitals
Dor, Duffy, and Wong	1997	Hospitals	Contract or salaried managers	Hospitals that had contract managers had less labor expense than those with salaried managers
Smirlock and Marshall	1983	Banking and savings and loan	Amount of competition	Agency problems were the reason behind expense preference behavior not the level of competition
Blair and Placone	1988	Savings and loan	Amount of competition and organizational structure	Neither competition level nor organizational structure was statistically significant in whether managers exhibited expense preference behavior

There are many studies that support both expense preference behavior and profit maximizing behavior. There is no definitive answer though to which theory is correct or more predominant. As shown with the studies above there are many ideas as to why expense preference behavior occurs or does not occur under specific conditions. As noted in the introduction, there are no previous studies that analyze whether expense preference behavior occurs in restaurants.

Whether managers exhibit expense preference behavior or not is important in restaurants because of the large amount of debt that restaurants have and in turn the large amount of interest expense. There are a variety of studies on why

restaurants have high debt. Dalbor and Upneja (2007) state that restaurants have higher debt because debt tends to control potential agency problems by limiting what managers have available to spend. They find their sample's mean total debt ratio to be more than 50 percent of assets. Some public restaurant firms have also been known to borrow money to buy back outstanding stock to make more equity available to fewer common stockholders or to implement dividend policies, which also returns more equity to stockholders (Berta, 2006).

Based on a COMPUSTAT analysis of restaurant firms from 2000 to 2007, interest expense averaged about two percent of sales, with some firms having interest expense as high as 15 percent. These large numbers, especially in light of the already low profit margins, show the importance of analyzing whether managers of public restaurants do exhibit expense preference behavior or if they decrease other expenses as interest expense increases.

Methodology

Interest rates for restaurant firms are beyond managerial control, and quite often change with Fed fund target rates (Upneja, Dalbor & Hua, 2008). This unique feature of interest rates provides an opportunity to test expense preference hypothesis because increasing interest rates leads to increasing restaurant interest expense, which would in turn leads restaurant managers to cut down other expenses if they truly seek to maximize profitability, where

$$\text{Other expenses} = \text{Revenue} - \text{Net Income} - \text{Interest Expense} \quad (1)$$

In other words, if controlling for net income as a proxy for profitability and other factors that could impact other expenses, profit maximization would indicate a negative or no relationship between interest expense and other expenses. Consequently, exploring whether restaurant managers exhibit expense preference behaviors or not reduces to testing the following null hypothesis:

H_0 : interest expense increases have a negative or no effect on other expenses, *ceribus peribus*.

Rejection of this hypothesis would indicate evidence of restaurant managers exhibiting expense preference behavior. Specifically, we have¹

$$\text{OtherExp} = \beta_0 + \beta_1 \text{IntExp} + \beta_2 \text{NI} + \beta_3 \text{FoodExp} + \beta_4 \text{Franchise} + \beta_5 \text{Year} + \varepsilon \quad (2)$$

Where

OtherExp = other expenses as defined in (1)

IntExp = Interest Expense of firm *i* in year *t*.

NI = Net Income of firm *i* in year *t*.

FoodExp = the annual food expenditure away from home collected from the Bureau of Labor Statistics.

Franchise = a dummy variable coded as one if firms disclose franchise practices in their firm description on Compustat or zero otherwise.

¹ Subscripts are suppressed for ease of presentation.

Year = a year index, from 1963 to 2007, to control for unobservables associated with time.

ε is a normally distributed error term with mean 0 and standard error of 1.

If the estimate of β_1 is significantly greater than zero, then we find evidence that H_0 is rejected. In the model we control for net income, annual food expenditures away from home, whether a firm utilizes franchise or not, as well as unobservable variables that correlate with time considering the following. First, if controlling for net income as a proxy for profitability and other factors that could impact other expenses, profit maximization would indicate a negative or no relationship between interest expense and other expenses. Moreover, food expenditures away from home can serve as a proxy for people's eating behavior as well as restaurant demand, which could subsequently impact other expense in a positive fashion (Hua & Templeton, in press). Therefore, to test the relationship between interest expense and other expense, profitability and the annual food expenditures away from home should be controlled for.

Moreover, franchising is likely to benefit small firms by enhancing their growth capabilities through infusion of capital, managerial experience, and sharing of risks (Roh, 2002). Claver-Cortes, Molina-Azorin, and Pereira-Molina (2007) suggest that franchising is highly advisable because the performance of chain establishments that franchise is stronger than that of the independent establishments. Consequently, utilizing franchise or not could impact other

expenses and should be controlled for. Furthermore, to control for factors that might be unobservable yet correlated with time, this study introduces a year index from 1992 to 2007 (Lev and Zarowin, 1999). For example, annual changes in inflation and population could be factors not directly observable, yet highly correlated with time.

Sample

We sample all publicly traded restaurant firms from 1963 to 2007 and collect relevant financial data from COMPUSTAT and “the annual food expenditure away from home” from the Bureau of Labor Statistics. After deleting missing values, we have a final sample consisting of 4,131 firm-year observations. Our rationale for doing a long horizon test was to make sure that economic cycles did not cloud the relationship. However, accounting rules and business environment can keep changing; therefore, we also ran the regression using data from 1998 to 2007. There was no qualitative change in the results.

Results

We first examine the descriptive statistics of the sample contained in Table Two below. Other expense (Other Exp.) has a negative minimum because firms incurred losses. This expense has a mean value of \$384.69 million with a standard deviation of \$1,307.05 million. Interest expense (Int. Exp.) has a mean of \$10.19 million with a standard deviation of \$38.49 million. Overall, restaurant

firms have \$17 million dollars in profits with a standard deviation of \$137.18 million. All firm specific financial data presented exhibit wide variations, indicating the risky nature of restaurant business to a certain degree. However, the general consumer food spending, as measured by annual food expenditures away from home (Food Exp.), shows a mean of \$169 billion with a standard deviation of \$106.29 billion, exhibiting much less volatility as compared to firm specific financial data.

Table 2
Descriptive statistics for the sample

Variable	Obs	Mean	Std. Dev.	Min	Max
Other Expenses*	4131	384.69	1307.05	-27.35	19974.5
Interest Expenses*	4131	10.19	38.49	0	467.6
Net Income*	4131	16.99	137.18	-1700.83	3544.2
Franchise	4131	0.18	0.38	0	1
Food Expenses#	4131	169	106.29	122.47	411.04
Revenue*	4131	411.81	1435.42	0	22786.6

Note:

* millions of dollars

billions of dollars

Obs. = number of firm-year observations

Other Exp. = Other Expense as defined in (1)

Int. Exp. = Interest Expense

NI = Net Income

Food Exp. = the annual food expenditure away from home

Pearson correlations are reported in Table Three. All correlations presented are significant at the 1 percent level. Int. Exp. and NI are moderately correlated. However, this correlation does not pose any problem to our regression analysis as a VIF analysis indicates a value less than 2. Other Exp. and Int. Exp are highly

correlated, as indicated by the highest correlation of .82 in the correlation table.

This may be considered as some support for expense preference behavior by managers.

Table 3
Correlation Matrix

	Other Exp.	Int. Exp.	NI	Franchise	Food Exp.
Other Exp.	1				
Int. Exp.	0.821	1			
NI	0.6768	0.6107	1		
Franchise	0.0718	0.1101	0.1324	1	
Food Exp.	0.2249	0.1501	0.1245	0.1232	1

Note:

Other Exp. = Other Expense as defined in (1)

Int. Exp. = Interest Expense

NI = Net Income

Franchise = a dummy variable coded as one if firms disclose franchise practices in their firm description on Compustat or zero otherwise.

Food Exp. = the annual food expenditure away from home

Table four presents regression results from equation (2). The dependent variable is other expenses. The key relationship between Interest Expense (Int. Exp.) and Other Expense (Other Exp.) shows a coefficient estimate of 21.8699 which is significant at all reasonable levels. The significance of this coefficient indicates that H_0 is rejected. In other words, on average, publicly traded restaurant firm managers do appear to exhibit expense preference behavior. On the other

hand, it may be that managers are price takers and during periods of inflation all prices go up along with interest rates.

Echoing previous research findings, utilizing franchising does help to increase profitability as indicated by the coefficient estimate of -158.096 between Franchise and Other Expense. Having a negative franchise coefficient, may indicate that firms with franchises are better at controlling other expenses. White (1980) errors are calculated to account for potential heteroscedasticity in the data. Further sensitivity tests are carried out and conclusions reported in the sensitivity section.

Table 4
Regression Results

$$OtherExp = \beta_0 + \beta_1 IntExp + \beta_2 NI + \beta_3 FoodExp + \beta_4 Franchise + \beta_5 Year + \varepsilon$$

Other Exp.	Coef.	Robust Std. Err.	t	P> t	Adjusted R-Square
Constant	61,256.74	11,620.47	5.27	0	73.70%
Int. Exp.	21.8699	1.713	12.77	0	
NI	2.6100	0.4198	6.22	0	
Food Exp.	0.004	0.0007	6.26	0	
Franchise	-158.096	26.1906	-6.04	0	
Year	-31.0996	5.9002	-5.27	0	

Note:

Other Exp. = Other Expense as defined in (1)

Int. Exp. = Interest Expense

NI = Net Income

Franchise = a dummy variable coded as one if firms disclose franchise practices in their firm description on Compustat or zero otherwise.
Food Exp. = the annual food expenditure away from home
Year = year index, 1963 to 2007, controls for unobservables associated with time.

One surprising result is that as net income increases (falls) other expenses increase (fall). The relationship between food expenditures away from home and other expenses is significant and positive. This may be a result of increases in general price levels for both food and other expenses.

Sensitivity Tests

Our results are robust to alternative model structural specifications such as fixed effects or random effects. In addition, for different model specifications, the results are robust to autocorrelation corrections. Various size proxies such as total assets, sales, or market capitalization do not significantly altering the relationship found herein. Moreover, the use of Selling, General and Administrative as the dependent variable (as opposed to our formulation of “other expenses”) does not qualitatively change the tested results either. We also explored using EBITDA as an alternative to NI to impute “other expenses” in equation 1 and found similar results to those reported in the study.

Conclusions and future research

The purpose of this research was to examine whether or not restaurant managers exhibit expense preference behavior originally posited by Williamson (1963) in regards to interest expense. In other words, when interest expense

increases, other expenses are not adjusted downward. The major finding of this paper shows that other expenses increase along with interest expense. There are a number of potential explanations for this. One is that managers are indeed exhibiting expense preference behavior when interest expense increases. On the other hand, it may be that managers are price takers and during periods of inflation all prices go up along with interest rates. In conjunction with that, firms may borrow more money to help pay for increasing other expenses, thus raising interest expense.

One potential avenue of future research could be a similar examination in other branches of the hospitality industry. Another potential topic might be to examine any differential in which particular expenses increase, decrease or stay the same as interest expense increases. This assumes the availability of very specific line item data from these firms. This study could also be limited to only firms that showed an increase in interest expense year over year, where the amount of debt remained stable. Finally, a more detailed investigation into our finding of the positive relationship between net income and other expenses could be warranted.

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