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A Longitudinal Study of Equipment Leasing in the U.S. Lodging Industry

Introduction

Equipment leasing (as opposed to an outright purchase) has witnessed a dramatic increase in the United States over the last three decades (Schmidgall & Upneja, 2001). The entire U.S. industry invests approximately $500 billion in new equipment each year, and over half of these investment dollars are spent on leased equipment. According to the Equipment Leasing and Finance Association Web site (www.ELFAonline.org), a leasing volume of $600 billion accounted for 55% of $1190 billion of total investment for 2010.

Research on leasing in the lodging industry was conducted years ago by Schmidgall and Upneja and now ten years later it is time to take another look. Have reasons for leasing changed?

Accordingly, this study investigated why hotels use operating leases from a longitudinal view. The two major objectives of this study are as following: (1) collect statistical data on the magnitude of leasing in the hotel industry (2) compare the primary reasons that financial executives of lodging firms currently use to justify their decision to lease versus purchase to the reasons determined by Schmidgall and Upneja (2001).

This article is organized in the following manner. The next section discusses literature pertinent to the issue including the reasons for leasing and why a longitudinal research is necessary. This will be followed by methodology and sample. Results will be presented next, and the article finishes with conclusions and recommendations for further research.

Literature Review

Although leasing is sometimes a risky arrangement (Wilder, 2006), there are many reasons for the popularity of using leases to acquire assets rather than purchasing them outright. Schmidgall & Upneja (2001) found that the main reasons for equipment leasing were to avoid obsolescence, to obtain tax benefits, and to sustain cash flow. Eisfeldt & Rampini (2006) argued that the benefit of leasing is that repossession of a leased asset is easier than foreclosure on the collateral of a secured loan, which implies that leasing has higher debt capacity than secured lending. Dafnis (2008) also argued that lease financing can be used to bundle a broad range of assets needed for property improvement plans. According to Page (2007) and Whittaker (2008), hotel companies also use sale and lease-backs as a way to release value from a real estate investment.

Ravi (2006) indicated several benefits of leasing. First, in comparison to using bank loans for purchasing equipment, leasing offers 100% financing in terms of the equipment value whereas most banks offer approximately 80% financing of the asset's purchase price. Second, leasing provides financial flexibility. Unlike debt, which requires timely payments to avoid high interest rates and potential bankruptcy problems, lease payments can be structured to the lessee's

advantage. Taking the operating cycle and the cash cycle of the lessee into consideration, lease payments can be correlated with the timing of the cash inflows and outflows. Last, leasing is also an avenue to minimize obsolescence risk. This is one of the major benefits that stems from leasing equipment. Certain equipment types are rapidly outdated or become obsolete before their useful life (i.e. hi-tech equipment and computer software).

Page (2007) also examined advantages for leasing. Leasing has some tax and accounting advantages; it can also be easier to market and sell. Another advantage of a lease arrangement is that the operator retains all the benefit of the operational turnover and profit, rather than just taking a small percentage of both. Finally, a lease gives an operator much more control and freedom to run the operations as it thinks fit.

According to Upneja & Dalbor (1999), the main advantages to leasing accrue from the minimum up-front costs needed (lower down payment) to acquire assets and the tax advantages of leasing for some firms. For example, firms subject to alternative minimum tax because of excessive tax-preference items cannot use the accelerated methods of depreciation and have to use the straight-line method. However, leasing expenses are fully deductible and may be the more preferred route for these firms. Firms that are in financial distress may not qualify for debt to buy equipment outright, and leasing may be the only way to acquire equipment. The authors document a negative relation between the use of operating leases and the marginal tax rate faced by the firm, but their research only focuses on restaurant industry but not lodging industry.

The use of debt and the associated tax shields has also been shown to be beneficial to the value of the firm. Andrew (1988) suggested that the choice of firm debt maturity structure varies with the firm's marginal tax rate and the shape of the corporate debt yield curve. Overall, high tax rate firms can positively influence firm value through the presence of interest tax shields. Sheel (1994) tested the hypothesis that lodging and manufacturing firms with large non-debt tax shields (i.e. depreciation, depletion, and investment tax credits) use less debt in their capital structures. His results show a negative relationship between the use of debt and nontax shields that is statistically significant. Although his findings support the positive relationship between tax shields and use of debt, the study did not address the use of leasing.

Bedrossian & Hein's research (1985) indicated leasing suitable land is one of the best ways to increase income for hunting club. A study by Marler (1993) examined the nature of leasing by restaurant companies and found some support for smaller firms choosing operating leases over capital leases to provide "window-dressing" for their balance sheets. In addition, the study found some evidence that small firms enter into operating leases to enhance measures of financial performance. However, her study did not include any specific tax effects.

Although Romney (2007) argued that leases of hotels should be different from the leases of other property assets because hotels form a distinct and very different property asset class, some of the findings still help us have better understanding on leasing.

Graham et al. (1998) also studied the effects of tax rates on leasing and debt policy. They

argued that tax rates are endogenous to the financing decision; researchers often find a spurious negative relationship between tax rates and debt financing. Their results indicated a negative effect between tax rates and operating leases and a positive relationship between tax rates and debt financing. Overall, in addition to the examination and understanding of leasing behavior, the authors believed that the results may help explain the choice of capital structure by firms. However, their study did not address hospitality firms specifically.

Taxman (2011) provides several advantages of leasing. It offers fixed rate financing so that the same monthly rate is paid. Leasing better utilizes equipment--- the lessee leases and pays for equipment only for the time it is needed. Equipment can be upgraded---as new equipment becomes available the firm upgrades to the latest models each time your lease ends. Leasing offers potential tax benefits depending on how the lease is structured. Leasing is inflation friendly---as the costs go up over five years, the lessee still pays the same rate as when it began the lease. There is less upfront cash outlay—the lessee does not need to make large cash payments for the purchase of needed equipment. The first three advantages were not discussed by prior researchers, but they are possible reasons for leasing and will be discuss later in this paper.

There have been extensive efforts to understand why hotels use operating leases and what the reasons for leasing are (Sharpe & Nguyen, 1995, Schmidgall & Upneja, 2001); nevertheless, there is no such a research to examine the reasons for leasing in lodging industry as the second decade of this century commences. In order to more comprehensively understand the reasons for leasing, further research is clearly needed. Thus, this study investigated why hotels use operating leases from a longitudinal view.

Methodology

Design

A longitudinal research design was used in which the statistical data on the magnitude of leasing and the reasons for leasing were measured at Time 1 (T1), in Schmidgall & Upneja's research in of 2000. To examine the changes in leasing characteristics and the reasons for leasing, the outcome was measured again at Time 2 (T2), in 2010, ten years after the collection of the T1 data.

Instrument development and pilot study

A survey instrument was used to collect the data in this study; the survey contains three sections:

1. Current amount of leasing, which includes property characteristics of leased equipment.
2. The reasons for leasing equipment measured on a five point scale. The scale was anchored by 1 = "not important" and 5 = "very important".
3. Demographic information (position, major area, professional certification, years of experience).

Schmidgall and Upneja's research measured eight reasons for leasing in the lodging industry

in 2000. In the follow-up study in 2010, three more reasons as discussed earlier were added (See Figure 1): (1) offers fixed rate financing; (2) leasing better utilizes equipment; and (3) the availability to keep upgrading.[1]

Figure 1 – Reasons for Leasing

Reasons	Explanations
a. Lower down payment.	Lower down payment than with purchase.
b. Bank credit lines.	Keeps the bank lines of credit open
c. Protection from obsolescence.	Provides protection against obsolescence
d. Uniform cash flow.	Cash outflows are constant.
e. Tax advantages.	Periodic payment is deductible as a business expense.
f. Decrease tax liability.	In certain instances, leasing results in a lower taxes.
g. Focus on core operations.	As the costs go up, lessee pays the same rate as when the lease started, therefore eliminating the potential frustration of renegotiations.
h. Alternative credit.	It is difficult to obtain debt to acquire equipment so leasing is required.
i. Offers fixed rate financing.	Rate is fixed over lease term.
j. Better utilizes equipment.	Lease and pay for equipment only for the time you need it.
k. Keep upgrading.	Upgrade to the newest models each time the hotel's lease ends

A pilot study was conducted using a sample of 50 financial executives associated with the lodging industry from Hospitality Financial and Technology Professionals (HFTP). From the pilot study, the questions presented were determined to be clear to potential respondents.

Sample

Through a stratified sampling method, 500 members of the lodging section of HFTP were selected. To gain valid responses, IT members associated with lodging were purposely excluded. Before we sent out the survey, each of them received a survey request letter which simply introduced the purpose of this study. Participation in the study was voluntary and they were assured that their responses would be treated on a confidential basis.

At time 1, Schmidgall & Upneja sent a questionnaire to 500 members of HFTP and collected 77 valid responses, yielding a response rate of 15.4 percent.

At time 2, among the 500 questionnaires, 41 of them were returned because of wrong addresses, so the total number of questionnaires sent out was 459. Sixty-five valid responses were received, yielding a response rate of 14.2 percent.

[1] Taxman.(2011) Pros and cons of lease finance, www.mrtaxman.com.au, Feb 07 2011

Discussion of Results

Descriptive statistics

The 65 respondents represented 26 properties that were independents, 11 chain-owned properties, 17 that were chain affiliated franchised properties, and six were multi-properties. The remaining properties indicated "other," such as branded management company, club, or corporate for owners. The average property size of respondents was 373 rooms, which was a small increase compared to the Schmidgall and Upneja survey of 342 ten years ago. Twenty-four properties had less than 200 rooms, six properties had between 201 and 300 rooms, 13 hotels had between 301 and 400 rooms, six properties were between 401 and 500 rooms, nine properties had between 501 and 1,000 rooms, and, finally, there were six properties that had more than 1,000 rooms.

Four properties reported having annual revenues of less than $5 million and another thirteen reported revenues between $5 and $10 million. Twenty properties reported revenues between $10 and $25 million, 19 properties had revenues between $25 and $50 million, and 9 properties reported revenues greater than $50 million. The average revenue per property was about $ 25 million. It is interesting to mention that the average revenue per property is the same as in the aforementioned survey of ten years ago.

The 2010 survey questionnaire requested financial amounts from equipment acquisition budgets and lease expenditure budgets (see Exhibit 1), while this information was not requested during the 2000 survey. The average equipment acquisition budget and average lease expenditure budget are $ 219,774 and $29,104 respectively.

Exhibit 1 Equipment acquisition budget and Lease expenditure budget for the year 2009

Equipment acquisition budget	Percent	Lease expenditure budget	Percent
Less than $50,000	9.7%	Less than $20,000	43.9%
Between $50,001 and $75,000	8.1	Between $20,001 and $30,000	6.8
Between $75,001 and $100,000	9.7	Between $30,001 and $40,000	10.2
Between $100,001 and $200,000	19.3	Between $40,001 and $50,000	13.6
Between $200,001 and $300,000	17.7	Between $50,001 and $75,000	6.8
Between $300,001 and $500,000	16.1	Between $75,001 and $100,000	5.1
Between $500,001 and $1,000,000	11.3	Between $100,001 and $200,000	5.1
More than $1,000,000	8.1	More than $200,000	8.5
Total	100.0%	Total	100.0%

Financial executives were queried regarding equipment they leased, the length of those leases, and whether a maintenance contract was purchased. The most common equipment leased was copiers, by 37 of the 65 respondents in 2010 and 43 of 77 respondents in 2000. The lengths of the leases varied from a year to over 10 years, and the majority of hotel operators also purchased maintenance contracts. A summary of the major items leased by hoteliers is shown in Exhibit 2.

Exhibit 2 Leased equipment, length of leases, and maintenance contracts

2010 Leased equipment	% of respondents	-----Length of lease----- Range	Average	Maintenance contract
Copiers	56.9%	1-20years	4.2years	97%
Mailing equipment	35.4%	1-20years	4.1years	86%
Vehicles	29.2%	2-10years	3.8years	44%
Telecommunication equipment	21.5%	1-6years	3.5years	92%
Fax machines	12.3%	1-20years	5.6years	57%
Kitchen equipment	10.8%	2-5years	3.5years	57%
Other*	8.0%	3-10years	23years	100%
Computers, services	6.2%	3-5years	4years	75%
Check verification system	1.5%	1year	1year	100%

*Other items include: folding machines and golf carts

2000 Leased equipment	% of respondents	-----Length of lease----- Range	Average	Maintenance contract
Copiers	55.8%	3-6years	3.9years	98%
Other*	37.7%	1-10years	4.3years	46%
Vehicles	28.5%	1-5years	3.4years	27%
Telecommunication equipment	27.3%	3-10years	5.3years	95%
Computers, services	25.9%	2-5years	3.8years	68%
Mailing equipment	15.5%	3-5years	3.9years	91%
Fax machines	10.3%	1-5years	3.1years	100%
Kitchen equipment	9.1%	1-5years	3.4years	43%

*Other items were not explain in the 2000 research

Copiers were the most common equipment items leased both 10 years ago (56.9%) and in 2010 (55.8%). It was interesting that mailing equipment was not commonly leased in 2000 (15.5%), but it was the second most common item leased in 2010 (35.4%); and most respondents who leased mailing equipment also purchased maintenance contracts in both periods. Another interesting finding is that all the respondents who leased fax machines also purchased maintenance contracts in 2000, while only 57% of respondents did in 2010.

In 2010, nearly seventy-five percent of respondents capitalized less than 10 percent of their leases, and in 2000 about sixty percent of respondents gave the same answers. In 2010, less than ten percent of respondents capitalized more than 75 percent of their leases while in 2000, almost twenty percent of the respondents capitalized more than 75 percent of their leases. Thus, it appears fewer equipment leases were capitalized in 2010 than a decade ago.

Respondent's opinions about the future trends of leasing equipment in the lodging industry are shown in Exhibit 3.

Exhibit 3 Perceived future trend of leasing equipment

	2010		2000	
	Frequency	**Percent**	**Frequency**	**Percent**
Will substantially decrease from current levels	4	9.5%	5	7.0%
Will marginally decrease from current levels.	10	23.8	0	0
Will stay at about the same level.	22	52.4	32	42.0
Will marginally increase from current levels	6	**14.3**	35	**49.0**
Will substantially increase from current levels	0	0	0	0
Total	42	100.0%	72	100.0%

In 2010, 14.3 percent of the respondents thought leasing would marginally increase from current levels, 52.4 percent of the respondents thought that the future trend of leasing equipment would stay at about the same level, and the remaining 33.3 percent thought the trend of equipment leasing would decrease. However, in 2000, 49 percent of respondents thought the future trend of leasing would marginally increase, 42 percent of them thought it would stay the same level, and only 7 percent of them thought it would decrease. Thus, overall the 2010 respondents believe there will be less leasing in the future than the 2000 respondents believed 10 years ago.

Comparison of reasons for leasing

The second major objective of this study was to determine the primary reasons that hotel financial executives lease equipment. To achieve this objective, survey participants were requested to indicate on a five point scale the importance of reasons for leasing (see Exhibit 4).

Exhibit 4 Comparative Importance of Reasons for Leasing

	2010		**2000**	
	N	**Mean**	**N**	**Mean**
Protection from obsolescence	50	3.41②	76	3.68①
Uniform cash flow	50	2.63	77	3.24②
Tax advantages	50	3.22	77	3.23③
Lower down payment	50	3.40③	77	2.90
Focus on core operations	50	2.94	76	2.55
Decrease tax liability	49	2.60	76	2.48
Bank-credit lines	49	2.76	75	2.42
Alternative credit	50	2.25	76	1.94
Keep upgrading	50	3.78①	NA	NA
Offers fixed rate financing	50	3.33	NA	NA
Better utilizes equipment	50	3.27	NA	NA

①②③ are the sequence number of the importance.

NA = reason not included on Schmidgall and Upneja 2000 survey.

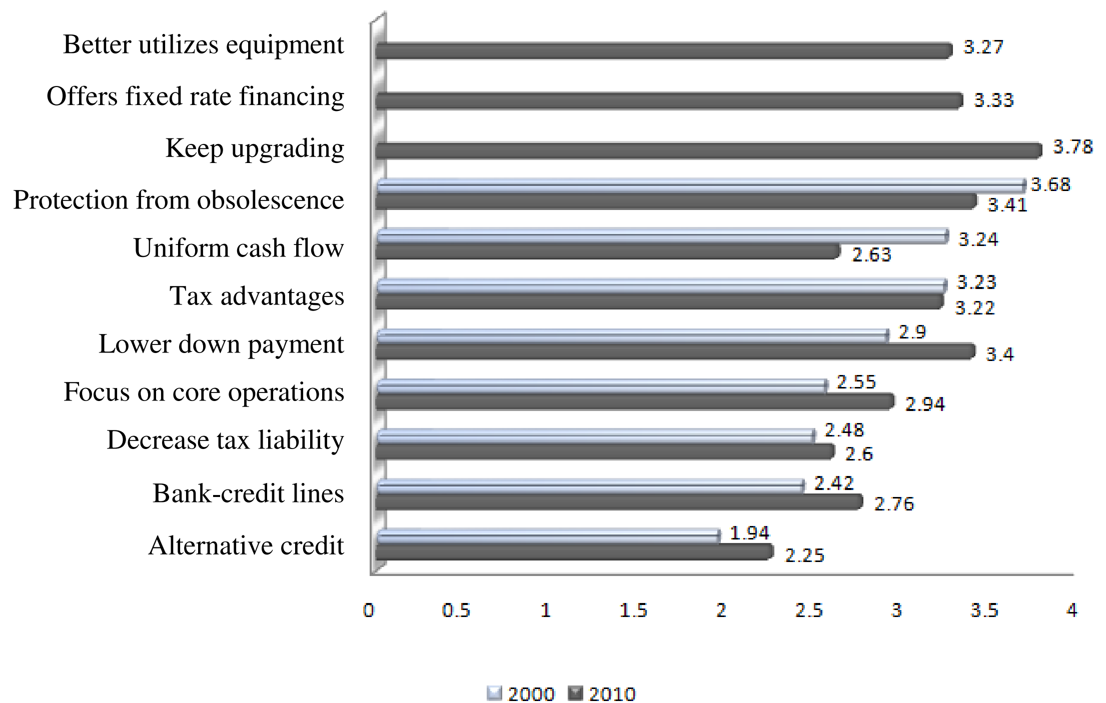
Scale: 1 “not important at all”, 2 “not very important, 3 “somewhat important”, 4 “very important”, and 5 “extremely important”

The three most important reasons for leasing equipment in 2000 were “protection against obsolescence”, “uniform cash outflows”, and “tax advantages”; however, “uniform cash outflows” was one of the least important reasons in 2010, the other two least important reasons are “decrease in tax liability” and “alternative credit”. In 2010, “keep upgrading”, “protection against obsolescence”, and “lower down payment” are the three most important reasons.

The significant difference between Time 1 and Time 2 are “uniform cash flow” and “lower down payment”. As can be seen from Exhibit 4 above, “uniform cash flow” was the second important reason at 3.24 in 2000, but it was only 2.63 in 2010, which was the fourth least important reason for leasing; “lower down payment” was in the opposite situation as it was of lesser importance in 2000 but was the third most important reason in 2010. Keep upgrading was the most important reason in 2010 and it was not included as a possible reason by Schmidgall and Upneja in 2000.

Side by side comparisons of the importance of reasons for leasing for each time period are shown in Exhibit 5.

Exhibit 5 – Graphically Comparative Importance of Leasing



This research including three potential reasons for leasing that were not included in the 2000 lease study. These three new reasons were in the top five of ten reasons for leasing equipment by hoteliers in 2010.

Conclusions

Summarized Findings

The most common equipment items leased were copiers both 10 years ago and in 2010. Mailing equipment was the second most common item leased in2010 (35.4%), but only a few firms leased this equipment item in 2000 (15.5%). All the respondents who leased fax machines also purchased maintenance contracts in 2000, while only just over half of the respondents did in 2010.

Less than ten percent of respondents capitalized more than 75 percent of their leases in 2010; however, almost twenty percent of the respondents capitalized more than 75 percent of their leases in 2000.

In 2000, 49 percent of respondents thought the future trend of leasing will marginally increase, 42 percent of them thought it will stay the same level, and only 7 percent of them thought it will decrease. However, in 2010, 14.3 percent of respondents thought it will marginally increase from current levels, 52.4 percent of respondents thought that the future trend of leasing equipment will stay at about the same level, and the other 33.3 percent thought the trend of equipment leasing will decrease.

The major reasons for leasing in 2000 were (1) protection from obsolescence, (2) securing tax advantages, and (3) ensuring uniform cash outflows; while (1) keep upgrading, (2)protection against obsolescence, and (3) lower down payment were the three most important reasons in 2010.

Uniform cash outflow was no longer an important reason for leasing, while lower down payment became increasingly important to controllers to justify their decision to lease versus purchase. One reason the lower down payment becomes very important is that, during the economic recession, many lodging firms did not have sufficient cash flow to acquire assets, and the lower down payment become very important for them to minimize up-front cash required.

Contributions

This study makes valuable contributions to both industry and academia. Hotel controllers are informed of the extent of leasing and the major reasons others lease rather than buy equipment. For academicians the longitudinally study shows the primary reasons that hotel controllers used to justify their decision to lease versus purchase, and compares these results overtime. Further, the extent of leasing can be shared with their students.

Limitations and future research

The major principal potential limitation is non-response bias, which means that the findings with a low response rate (14.2%) may not be generalizable to the general population of hoteliers. A further limitation of the study is that, as respondents were randomly selected from members list from HFTP, they cannot be the same in both Time 1 and Time 2, which influences the consistency of a longitudinal research. Further research conducted in other segments of the hospitality industry and other jurisdictions should be undertaken to investigate these leasing issues. Further, the study only shows modest shifts in leasing behavior, more questions should be asked in a future study, especially after the proposed rules for lease accounting if finalized are implemented.

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