Hospitality finance research during recent two decades

Subjects, methodologies, and citations

SooCheong (Shawn) Jang and Kwangmin Park
Department of Hospitality and Tourism Management, Purdue University,
West Lafayette, Indiana, USA

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Abstract

Purpose – The purpose of this study is to understand hospitality finance research through content analysis by examining articles published during the past two decades (1990 to 2009).

Design/methodology/approach – This study identified subject areas, methodologies, and citations from hospitality finance papers published in four major hospitality journals (*Journal of Hospitality & Tourism Research, International Journal of Hospitality Management, International Journal of Contemporary Hospitality Management, and Cornell Hospitality Quarterly*).

Findings – A perusal of 113 hospitality finance articles suggested that researchers have focused on several subjects, such as risk management, financing, bankruptcy, and capital structure. Even though qualitative analysis was the most common method in the 1990s, the use of quantitative analyses dramatically increased during the recent decade.

Research limitations/implications – The data were collected from four hospitality journals. If data were collected from more hospitality journals, the most common subjects and citations might be different from the results of this study.

Practical implications – This study offers readers a perspective on how hospitality finance research has been conducted recently and also suggests a big picture about the potential direction of future research.

Originality/value – This study provides valuable information about past and current research streams, as well as the direction of hospitality finance research. Compared with previous review studies, this study concentrated on a specific segment of hospitality research in order to improve basic understanding of what is going on in the hospitality finance research, which has never been examined before.

Keywords Hospitality services, Finance, Serials

Paper type Research paper

Introduction

A comprehensive review of prior research in a field can provide an overview of the boundaries and understandings of research subjects in a field, as well as practices and statistical techniques used in that field. In particular, research subjects, methodologies, and analysis techniques could be considered as the indicators of future research directions and methodological sophistication (Crawford-Welch and McCleary, 1992; Grazer and Stiff, 1987; Reid and Andereck, 1989). Many scholars have consistently reviewed and reported on research papers published in hospitality and tourism journals during the last two decades, providing the general trend of research subjects (Baloglu and Assante, 1999; Chon *et al.*, 1989; Crawford-Welch and McCleary, 1992; Dann *et al.*, 1988; Eder and Umbreit, 1988; Harris and Brown, 1998; Olsen, 2004; Olsen



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and Roper, 1998; Rivera and Upchurch, 2008). Most hospitality review papers simply provided a broad overview of the trends in topics but did not provide the details of subjects, samples, and methodologies. Only two of the hospitality review papers (i.e. Baloglu and Assante, 1999; Crawford-Welch and McCleary, 1992) provided details on hospitality subjects. However, the aim of these papers was to handle all fields of hospitality research broadly, not to target a specific field in depth.

Despite the importance of finance subjects in hospitality management, little has been done to analyze the reviews and/or summaries of prior hospitality finance studies. Thus, considering the increasing importance of hospitality finance research, the purpose of this study was to investigate hospitality finance research published during the past two decades (1990-2009) in four major hospitality journals:

- (1) Journal of Hospitality & Tourism Research (JHTR);
- (2) International Journal of Hospitality Management (IJHM);
- (3) International Journal of Contemporary Hospitality Management (IJCHM); and
- (4) Cornell Hospitality Quarterly (Cornell).

This study provided a big picture of past and current research streams and information regarding the direction of hospitality finance research. This study will provide researchers with a better understanding of the field as a whole for their future research. More specifically, the objectives of this study were:

- to identify what kind of subjects have been researched in hospitality finance studies;
- to identify the hospitality industries and countries/regions focused on in the studies;
- to examine the percentage of quantitative and qualitative studies that have been conducted; and
- to investigate the citation status of hospitality finance papers.

In the following section we briefly explain prior hospitality and tourism review papers. In the next section, we introduced the methodology used in this study. Finally, the results are presented, including suggestions for future hospitality finance research.

Related literature

As noted, many scholars have investigated prior research in the hospitality and tourism field (Baloglu and Assante, 1999; Chon *et al.*, 1989; Crawford-Welch and McCleary, 1992; Dann *et al.*, 1988; Eder and Umbreit, 1988; Harris and Brown, 1998; Olsen, 2004; Olsen and Roper, 1998; Rivera and Upchurch, 2008). Dann *et al.* (1988) categorized tourism research into several subjects and also examined which methodologies were used. Based on the findings, the study claimed that tourism research lacks sufficient methodological sophistication. Eder and Umbreit (1988) also indicated that hospitality research needed to ensure research validity.

Chon *et al.* (1989) performed content analysis on 1,251 papers published from 1967 to 1986 in four hospitality journals:

(1) Cornell Hotel and Restaurant Administration Quarterly (currently Cornell Hospitality Quarterly);



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- (3) International Journal of Hospitality Management; and
- (4) FIU Hospitality Review.

They examined author type, methods and research subjects and found that most papers were published by university faculty members and that surveys and experiments were the least used methods.

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Baloglu and Assante (1999) provided more informative details on hospitality research. They examined 1,073 hospitality papers spanning seven years (1990-1996) from five hospitality journals:

- (1) Cornell Hotel and Restaurant Administration Quarterly;
- (2) Hospitality Education and Research Journal;
- (3) International Journal of Hospitality Management;
- (4) International Journal of Contemporary Hospitality Management, and
- (5) FIU Hospitality Review.

They divided hospitality papers into six categories:

- (1) marketing;
- (2) finance:
- (3) administration/strategy;
- (4) operations;
- (5) research and development; and
- (6) human resources.

Through content analysis, Baloglu and Assante (1999) found that human resources was the most frequently studied subject and descriptive and univariate statistics were the most commonly used methods in hospitality studies during the study period.

Crawford-Welch and McCleary (1992) analyzed 653 hospitality articles published from 1983 to 1989 in four hospitality journals (Cornell Hotel and Restaurant Administration Quarterly, International Journal of Hospitality Management, FIU Hospitality Review, and Hospitality Education and Research Journal) and compared them with a tourism journal (Journal of Travel Research). They investigated the nature of research (qualitative versus quantitative), subjects (marketing, finance, administration, human resources, operations, research development, and economics), and types of statistical methods. They indicated that most papers in hospitality journals contained no statistical analysis at all, while many used simple descriptive statistics or drew conclusions that were not supported by their analysis. Thus, Crawford-Welch and McCleary (1992) stressed that until the early 1990s most hospitality studies used descriptive information to answer research questions. However, the information was not sufficient enough to test their hypotheses due to the lack of statistical inferences.



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Olsen and Roper (1998) and Olsen (2004) examined published papers of strategic management in hospitality journals. Olsen and Roper (1998) categorized hospitality strategic management studies into four subjects:

- (1) strategic planning;
- (2) competition and competitive advantage;
- (3) internationalization: and
- (4) strategy implementation.

They suggested that methodologies should be matched more appropriately with the purpose of the research questions. Olsen (2004) provided an overview of hospitality strategic management studies from 2002 to 2003 and concluded that most hospitality strategic management papers were conceptual and descriptive. Harris and Brown (1998) reviewed hospitality accounting and finance research and concluded that some of the research contained inadequate methods and superficial results and ultimately contributed little to knowledge in the hospitality discipline. Although their study did examine hospitality finance research, they did not use content analysis. Accordingly, it was difficult to understand the content of the research streams they examined.

Methodology

As mentioned previously, this study explored research articles published in four hospitality journals (*JHTR*, *IJHM*, *IJCHM*, *Cornell*) from 1990 to 2009. This study included full-length academic articles and research notes but excluded editors' comments, simple trend reports, and book reviews.

Baloglu and Assante (1999) divided hospitality research into six fields:

- (1) marketing;
- (2) finance;
- (3) administration/strategy;
- (4) operations;
- (5) research and development; and
- (6) human resources.

They also delineated detailed sub-categories for the field of finance:

- · asset management;
- buyouts;
- profitability;
- economic forecasting;
- financial analysis and management;
- valuation techniques;
- financial statements: and
- · cash flows.

Groppelli and Nikbakht (2006) defined finance as the application of a number of financial and economic principles to maximize the wealth or overall value of a



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business. On the other hand, Jarrow (1988) provided an alternative definition of finance as topics that appear with some regularity in such publications as Journal of Finance, Journal of Financial and Quantitative Analysis, Journal of Financial Economics, and Journal of Banking & Finance. Among those journals, Journal of Financial and Quantitative Analysis describes the scope of the journal as corporate finance, investments, capital and security markets, and quantitative methods of particular relevance to financial researchers. Journal of Financial Economics delineates the scope of the journal as capital markets, financial institutions, corporate finance, corporate governance, and the economics of organizations. On the other hand, Khan and Jain (2005) asserted that from a classical view the major areas of finance are financial services and managerial finance, corporate finance, and financial management. Following the definition of the main finance area, this study took a classical view of finance research. Thus, we included the following subjects as finance research in this study:

- · capital structure;
- · capital budgeting;
- · corporate governance;
- · financing behavior;
- · investments:
- · risk management;
- · valuation; and
- other topics related to the classic finance viewpoint.

Crawford-Welch and McCleary (1992) categorized their samples into qualitative and quantitative studies but did not provide the details of their categorization rules. In general, qualitative research involves analysis of data such as words, pictures or objects, but quantitative research involves the analysis of numerical data. However, even if research uses some numbers, such as published statistics (i.e. a census result table or special report from a consultant firm), it is problematic to label those types of studies as quantitative research unless they use results from statistical techniques (Olsen, 2004). For example, even though a study provides survey results, if the study uses only basic descriptive statistics such as percentage, frequency, mean, and standard deviation, it should not be considered a quantitative study. Accordingly, this study categorized a study as a quantitative study if it used at least one type of statistical analysis other than percentage, frequency, mean, and standard deviation. In terms of analysis methods, this study followed similar prior studies' statistical categorization (Baloglu and Assante, 1999; Crawford-Welch and McCleary, 1992; Grazer and Stiff, 1987; Ketchen et al., 2008; Reid and Andereck, 1989).

In general, some prior studies in the finance field used citations from the Social Sciences Citation Index (SSCI) as the main source for evaluating a relative importance of paper and journal. The number of citations represents both the importance and achievement of the paper and the journal. Thus, it is meaningful to check the number of citations for hospitality finance papers as well because this reveals which journals, subjects, and time periods papers have been cited by other papers. However, not all four hospitality journals included in this study (JHTR, IJHM, IJCHM, and Cornell)



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citation method was used instead.

Results

From 1990 to 2009 the four hospitality journals published 3,039 papers. Out of those, 113 papers (3.7 percent) were about finance subjects. *JHTR* published 26 finance papers (5.8 percent) out of 446 studies, *IJHM* published 33 finance papers (4.6 percent) out of 710 studies, *IJCHM* published 12 finance papers (1.4 percent) out of 867 papers, and *Cornell* published 42 finance papers (4.2 percent) out of 1,012 published papers. The *Cornell Hospitality Quarterly* published the most hospitality finance papers, but the largest proportion of finance papers was published in *JHTR*. As Table I shows, in the 1990s the number and proportion of finance papers in hospitality journals were small. In the 2000s, the numbers of hospitality finance papers have increased dramatically. For example, in 2009 there were 14 finance papers, which accounts for 7.2 percent of all published papers at the four journals. Thus, it is clear that interest in finance research in hospitality is undoubtedly increasing.

were listed on the SSCI (e.g. *IJHM*, *Cornell*, and *IJCHM* are listed but *JHTR* is not on SSCI). Since it was not possible to measure the SSCI citations for this study, Google

Table II shows the subjects of hospitality finance research. We categorized hospitality finance papers into 17 subjects. In order to examine the trend in subjects, we divided the 20 years into four periods (1990-1994, 1995-1999, 2000-2004, and

	JH	ITR	IJ	НМ	IJC	CHM	Cor	nell	To	tal
Year	n	Percent	n	Percent	n	Percent	n	Percent	n	Percent
1990	0/11	0.0	0/27	0.0	1/21	4.8	2/68	2.9	3/127	2.4
1991	0/14	0.0	0/30	0.0	1/26	3.8	2/59	3.4	3/129	2.3
1992	0/14	0.0	0/28	0.0	1/23	4.3	6/63	9.5	7/128	5.5
1993	0/37	0.0	2/24	8.3	1/32	3.1	2/64	3.1	5/157	3.2
1994	1/27	3.7	1/28	3.6	1/33	3.0	1/63	1.6	4/151	2.6
1995	0/12	0.0	3/26	11.5	0/43	0.0	3/59	5.1	6/140	4.3
1996	0/20	0.0	0/25	0.0	1/39	2.6	2/63	3.2	3/147	2.0
1997	0/10	0.0	0/29	0.0	0/39	0.0	3/51	5.9	3/129	2.3
1998	0/29	0.0	2/21	9.5	0/38	0.0	2/56	3.6	4/144	2.8
1999	1/22	4.5	2/27	7.4	0/46	0.0	0/55	0.0	3/150	2.0
2000	0/27	0.0	2/27	7.4	0/53	0.0	6/54	11.1	8/161	5.0
2001	1/25	4.0	0/25	0.0	0/45	0.0	1/55	1.8	2/150	1.3
2002	3/21	14.3	1/34	2.9	0/49	0.0	3/54	5.6	7/158	4.4
2003	3/27	11.1	0/31	0.0	1/61	1.6	3/61	4.9	7/180	3.9
2004	3/29	10.3	0/33	0.0	2/53	3.8	0/26	0.0	5/141	3.5
2005	1/22	4.5	1/34	2.9	0/54	0.0	2/28	7.1	4/138	2.9
2006	3/25	12.0	2/45	4.4	0/50	0.0	1/33	3.0	6/153	3.9
2007	4/25	16.0	6/71	8.5	1/51	2.0	0/31	0.0	11/178	6.2
2008	3/22	13.6	4/66	6.1	1/59	1.7	0/36	0.0	8/183	4.4
2009	3/27	11.1	7/79	8.9	1/56	1.8	3/33	9.1	14/195	7.2
Total	26/446	5.8	33/710	4.6	12/871	1.4	42/1012	4.2	113/3039	3.7

Table I.Hospitality finance papers published in four major hospitality journals

Notes: JHTR, Journal of Hospitality & Tourism Research; IJHM, International Journal of Hospitality Management; IJCHM, International Journal of Contemporary Hospitality Management; Cornell, Cornell Hospitality Quarterly



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	1990-1994	1995-1999	2000-2004	2005-2009	n	Γotal Percent	Hospitality finance research
Bankruptcy	4	1	2	3	10	8.8	
CEO compensation and performance	0	0	1	1	2	1.8	
Capital budgeting	0	1	0	1	2	1.8	
Capital structure	1	0	3	3	7	6.2	485
Dividend	0	0	1	1	2	1.8	
Financial performance/measurement	0	2	1	3	6	5.3	
Financing	3	3	3	4	13	11.5	
IPO	0	1	1	0	2	1.8	
Investment	1	3	2	1	7	6.2	
Leasing	1	0	1	1	3	2.7	
M&A	2	2	1	2	7	6.2	
Ownership structure	0	0	0	3	3	2.7	
REITs/real estate finance	1	1	3	1	6	5.3	
Risk management	1	1	6	12	20	17.7	
Stock market	0	1	0	5	6	5.3	
Valuation	6	0	3	1	10	8.8	Table II.
Other	2	3	1	1	7	6.2	The subjects of
Total	22	19	29	43	113	100.0	hospitality finance papers

2005-2009). Over the last 20 years, bankruptcy, financing, investment, and REITs/real estate finance have continuously been investigated by hospitality researchers. Risk management papers have been rapidly increasing since 2005. The most frequently studied subject was risk management and the next was financing. Valuation was examined six times from 1990 to 1995; however, it is not currently being written about as frequently as before. Interestingly, CEO compensation and performance, capital budgeting, dividends, IPO, leasing, ownership structure have not been frequently investigated. There have only been two or three papers addressing these subjects in the last 20 years. These results suggested that hospitality finance studies have concentrated mostly on a handful of subjects. Also, considering the number of articles in each subject area, we found that the research pool is rather shallow.

Table III shows the number and proportion of qualitative and quantitative research in hospitality finance. Similarly to Table II, we divided the 20 years into four periods. From 1990 to 1994 the portion of qualitative research was 77.3 percent while quantitative research was only 22.7 percent. However, the portion of quantitative studies increased to 31.6 percent between 1995 and 1999. After 2000, the proportion of quantitative studies became dominant. From 2000 to 2004 quantitative research accounted for 65.5 percent, and from 2005 to 2009 it accounted for 90.7 percent. This suggested that hospitality finance research has generally incorporated statistical tools for hypothesis testing during the past decade. Interestingly, JHTR mainly published quantitative hospitality finance research. For the past 20 years, *IHTR* published only two qualitative papers, but 24 quantitative studies. Also, IJHM published more quantitative finance papers – five qualitative and 28 quantitative papers. On the other hand, Cornell published more qualitative finance papers over the last 20 years – 30 qualitative and 12 quantitative papers. Even though the total number of published finance papers was small in *IJCHM*, the journal was well balanced in terms of its proportion of qualitative and quantitative finance research.



IJCHM 23,4		19 n	90-1994 Percent	19 n	95-1999 Percent	20 n	000-2004 Percent	20 n	05-2009 Percent	n	Γotal Percent
486	Qualitative JHTR IJHM IJCHM Cornell Subtotal	0 1 3 13 17	0.0 4.5 13.6 59.1 77.3	0 4 1 8 13	0.0 21.1 5.3 42.1 68.4	1 0 2 7 10	3.4 0.0 6.9 24.1 34.5	$\begin{matrix} 1 \\ 0 \\ 1 \\ 2 \\ 4 \end{matrix}$	2.3 0.0 2.3 4.7 9.3	2 5 7 30 44	1.8 4.4 6.2 26.5 38.9
Table III. The number of qualitative and quantitative studies in the hospitality finance research	Quantitation JHTR IJHM IJCHM Cornell Subtotal Total	ve 1 2 2 0 5 5 22	4.5 9.1 9.1 0.0 22.7	1 3 0 2 6	5.3 15.8 0.0 10.5 31.6	9 3 1 6 19	31.0 10.3 3.4 20.7 65.5	13 20 2 4 39	30.2 46.5 4.7 9.3 90.7	24 28 5 12 69	21.2 24.8 4.4 10.6 61.1 100.0

Table IV shows the target industries of hospitality finance papers. The most frequently investigated industry was the hotel industry (63.7 percent), followed by the restaurant industry (16.8 percent). Multi-industry focused papers accounted for 15.9 percent of papers: restaurant and hotel (10.6 percent) and restaurant, hotel and other (5.3 percent). Thus, most of the hospitality finance research has targeted the hotel industry. Table V shows the countries/regions of sampled firms. The results show that 67.3 percent of hospitality finance papers used US firms. In particular, 92.3 percent of JHTR's finance papers appeared to target US firms. However, only 16.7 percent of papers in IJCHM focused on firms in the USA; 75.8 percent of papers in IJHM and 59.5 percent of papers in Cornell focused on US firms. Interestingly, IJCHM had 41.7 percent UK samples and 8.3 percent other European samples. Thus, about half of the target sample countries/regions of IJCHM were from Europe. Thus, IJCHM has been more diversified in terms of countries/regions of sampled firms. Overall, hospitality finance studies published in JHTR, IJHM, and Cornell focused on the hotel industry and US firms, which suggests that more efforts should be made to diversify the sample industry and country.

Table VI shows types of statistical analysis methods used in the four journals and during the four periods. If a paper used more than one method, all the methods were recorded. Accordingly, the sum of the percentages exceeded 100 percent for each journal.

	1990-1994	1995-1999	2000-2004	2005-2009	n	Γotal Percent
Restaurant	4	3	4	8	19	16.8
Hotel	13	11	23	25	72	63.7
Restaurant and hotel	5	3	1	3	12	10.6
Restaurant and hotel and other	0	0	0	6	6	5.3
Other	0	2	1	1	4	3.5
Total	22	19	29	43	113	100.0

Table IV. Hospitality finance papers' target industry

Note: "Other" includes two airlines and eight gaming industries



	n ·	JHTR Percent	n	IJHM Percent	n Į	JCHM Percent	n	Cornell Percent	n	Γotal Percent	Hospitality finance research
USA	24	92.3	25	75.8	2	16.7	25	59.5	76	67.3	
Canada					1	8.3			1	0.9	
Europe					1	8.3			1	0.9	
UK					5	41.7			5	4.4	487
China			1	3.0			1	2.4	2	1.8	
Taiwan	1	3.8	3	9.1					4	3.5	
Turkey			1	3.0	2	16.7			3	2.7	Table V.
Australia	1	3.8							1	0.9	Countries/regions of
Multinational			1	3.0			1	2.4	2	1.8	sampled companies in the
n/a			2	6.1	1	8.3	15	35.7	18	15.9	hospitality finance
Total	26	100.0	33	100.0	12	100.0	42	100.0	113	100.0	research

In total, 66.4 percent of the hospitality finance papers used basic statistics (i.e. mean, median or standard deviation) and 10.6 percent of the research provided frequency/percentage information, which signified that descriptive statistics (i.e. means/median/standard deviation and frequency/percentage) were the major source for the results reported. The second most frequently used statistical analysis method was multiple regression (32.7 percent). The sum of simple regression and multiple regression was 43.3 percent, which indicated that hospitality finance researchers most frequently used regression analysis to estimate their research models. Regression methods are often used in the mainstream finance studies as well (Ryan *et al.*, 2002), but researchers in the finance field mostly utilize advanced regression models to address departures from assumptions for the OLS (ordinary least squares) regression (i.e. endogeneity, sample selection bias, and autocorrelations). Thus, hospitality finance researchers need to use more rigorous regression methods to address similar problems in regression analysis.

As explained earlier, papers that simply provide descriptive statistics were categorized as qualitative studies. Thus, the majority of quantitative research appeared to use regression analysis. T-tests and correlations were also used fairly often: t-tests were used in 16.8 percent and correlations in 15.9 percent. Relatively, JHTR showed the highest proportion of statistical analysis among all the journals. For example, 80.8 percent of the JHTR finance papers provided mean/median/SD tables and 53.8 percent used multiple regression. On the other hand, Cornell very rarely provided statistical results for most statistical methods. IJHM also provided a substantial amount of statistical results for all methods; 75.8 percent of the IJHM finance papers provided mean/median/SD tables and 51.5 percent of papers showed multiple regression tables. For *IJCHM*, 50 percent of finance papers provided mean/median/SD tables, 16.7 percent used multiple regression analysis and 25.0 percent used t-tests. In terms of period, from 1990 to 1994 both t-tests and multiple regression were used in 13.6 percent of papers, but the use of multiple regression has increased dramatically since then. In fact, the use of statistical tools has increased in all types of methods. From 2005 to 2009, 79.1 percent of hospitality finance papers provided mean/median/SD tables, 27.9 percent showed correlation and t-test tables, and 48.8 percent used multiple regression. Recently, approximately half of the hospitality finance papers we examined used multiple regression as a statistical tool. These findings mean that hospitality finance studies have used only a few analysis



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Table VI.Analysis methods in the hospitality finance research

	n.	JHTR Percent	l l	JHM Percent	$\begin{bmatrix} I \\ n \end{bmatrix}$	<i>IJCHM</i> Percent	n	Cornell Percent	199 n]	1990-1994 Percent	199 n I	995-1999 Percent	200 n	00-2004 Percent	200 n]	2005-2009 n Percent	n n	Total Percent
Mean/median/SD	21	80.8	25	••	9		23	54.8	12	54.5	2		22		34		75	66.4
Frequency/percentage	2	7.7	က	9.1	2	16.7	2	11.9	0	0.0	4	21.1	5	17.2	က	7.0	12	10.6
Correlation	∞	30.8	9		0		4	9.5	П	4.5	П		4		12		18	15.9
t-test	7	56.9	6		3		0	0.0	3	13.6	\vdash		3		12		19	16.8
χ^2	Π	3.8	2		0		0	0.0	0	0.0	0		П		2		3	2.7
ANOVA/ANCOVA/MANOVA	4	15.4	2		П		Π	2.4	0	0.0	0		П		2		∞	7.1
Simple regression	က	11.5	4		2		က	7.1	П	4.5	2		က		9		12	10.6
Multiple tegression	14	53.8	17		2		4	9.5	3	13.6	3		10		21		37	32.7
Logistic regression	1	3.8	2		0		0	0.0	0	0.0	\vdash		0		2		က	2.7
Probit/Tobit regression	Π	3.8	П	_	0		0	0.0	0	0.0	0		0		2		2	1.8
Time series model	3	11.5	1	_	0		П	2.4	0	0.0	0		\vdash		4		5	4.4
Canonical correlation	0	0.0	3		0		0	0.0	0	0.0	0		0		က		က	2.7
Discriminant analysis	Π	3.8	П	_	0		0	0.0	0	0.0	0		П		Н		2	1.8
Event study	1	3.8	1	3.0	_		0	0.0	1	4.5	0		0		2		က	2.7
Path analysis/SEM	П	3.8	0	0.0	0		0	0.0	0	0.0	0		0		Н		П	6.0
Non-parametric	2	7.7	0	0.0	0	0.0	П	2.4	0	0.0	0		0		က		က	2.7
Other	1	3.8	2	15.2	ಣ	25.0	$^{\circ}$	7.1	2	9.1	2		က		2		12	10.6

financial papers, IJHM published 33 hospitality papers, IJCHM published 12 hospitality papers, and Comell published 42 hospitality papers. Percentages Note: Multiple choices were used if a paper applied multi-analytical methodologies. During 20 years of sample period, JHTR published 26 hospitality were calculated as the number of method divided by number of hospitality finance papers published by each journal. During four five-year periods, 22, 19, 29, and 43 hospitality papers were published in each period. Percentages were calculated as the number of method divided by number of hospitality papers published in each period. The total number of hospitality finance papers was 113 in this sample and the percentage was calculated as the number of method divided by total number of hospitality finance papers (=113) methods. In contrast, logistic regression and probit/tobit regression methods were used only 2.7 percent and 1.8 percent, respectively. Canonical correlation, discriminant analysis, event study, and non-parametric methods have been used very rarely. Table VII provides further information about analysis methods according to subjects. Mean/median/SD was the most frequently used in all subjects. Again, most frequently used methods were multiple and simple regressions in most subjects. Bankruptcy studies frequently used discriminant analysis and financing studies frequently utilized canonical correlation method. Consistent with Table VI, Table VII shows that most hospitality finance studies mainly used descriptive statistics and focused on a few subjects (i.e. financing, REITs/real estate finance and risk management).

This study also investigated the citation status of hospitality finance research, employing Google Scholar citations. Google Scholar obtains its records from three sources (Walters, 2007):

- (1) scholarly documents in content and format on the publicly accessible web (i.e. journal articles, preprints, dissertations, and technical reports);
- its partners (i.e. journal publishers, scholarly societies, database vendors, and academic institutions); and
- (3) extracted citations from the reference lists of documents found through the first two methods, listing them as separate search results.

As shown in Table VIII, the total number of citations was the largest for *Cornell* (183 times) but the average number of citations was the largest for *IJHM* (4.5 times per paper). In regards to the time period, hospitality finance papers published from 1995 to 1999 were on average cited more frequently (6.7 times per paper) than any other period. In general, older papers are more frequently cited than newer ones, but, interestingly, papers from 1990 to 1994 were cited less frequently than papers from 1995 to 1999.

In terms of subject, papers on risk management were cited the most (81 times) but in terms of the average number of citations, papers on capital structure had the most citations (6.4 times per paper). This means that, on average, papers on capital structure have been cited most frequently. The reason may be that the capital structure theory could be used as a background for all other finance papers. Next were bankruptcy papers (5.9 times per paper) and financial performance/measurement papers (5.2 times per paper), which suggested that these subjects also provide useful background for other finance papers. On the other hand, dividends, REITs/real estate finance, and IPO papers were not cited frequently, which demonstrated that these subjects are too narrow and specific for other finance subjects to cite.

In terms of qualitative and quantitative research, qualitative research (4.4 times per paper) had been cited more frequently than quantitative papers (3.9 times per paper). The reason for this might be that older papers tend to be cited more and many finance papers published prior to 2000 were qualitative research. In terms of qualitative research, papers published from 1995 to 1999 were cited most frequently (7.1 times per paper). However, the older the quantitative studies were, the more frequently they were cited.

Concluding remarks

This study investigated various aspects of hospitality finance research. Over the last 20 years the number and proportion of finance studies published has dramatically increased. However, the subjects of hospitality finance papers have been limited to a



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	BNKK	CCP	CB	S	DIV	FPM	FIN	IPO	N	LEAS	M&A	OWS	KEIT	KM	STM	VAL	OI'H '	 Tota
Mean/median/SD	3	2	П	5	2	5	7	2	4	П	9	2	2	19	5	9	3	75
Frequency/percentage	0	0	П	2	0	0	4	0	1	1	П	1	0	0	0	1	0	12
Correlation	0	2	Π	П	0	ಣ	П	0	0	0	0	0	0	∞	1	0	1	18
t-test	1	0	0	2	_	2	0	П	0	0	2	0	1	3	2	3	1	19
χ^2	0	0	1	П	0	0	0	0	0	0	0	0	0	0	1	0	0	3
ANOVA/ANCOVA/MANOVA	1	0	0	П	0	2	0	0	0	0	0	0	1	2	1	0	0	∞
Simple regression	0	0	0	П	0	0	0	0	0	0	2	0	0	2	4	0	0	12
Multiple regression	1	2	0	2	0	က	П	0		П	2	2	1	10	4	3	1	37
Logistic regression	1	0	0	0	П	0	0	0	0	0	1	0	0	0	0	0	0	3
Probit/Tobit regression	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
Time series model	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	1	5
Canonical correlation	0	0	0	0	0	0	က	0	0	0	0	0	0	0	0	0	0	က
Discriminant analysis	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Event study	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
Path analysis/SEM	0	0	0	0	0	0	0	0	0	0	0	0	0	П	0	0	0	П
Non-parametric	0	0	П	0	0	0	0	0	0	0	П	0	0	П	0	0	0	က
Other	Π	0	П	П	0	0	П	0	0	0	0	0	0	П	2	4	П	12
Number of papers for each subject	10	2	2	7	2	9	13	2	7	3	7	3	9	20	9	10	7	113

Note: BNKR, bankruptcy; CCP, CEO compensation and performance; CB, is capital budgeting; CS, capital structure; DIV, dividend; FPM, financial performance/measurement; FIN, financing; IPO, initial public offering; INV, investment; LEAS, leasing; M&A, merger and acquisition; OWS is ownership structure; REIT is REITs/real estate finance; RM is risk management; STM, stock market; VAL, valuation, OTH, other

Table VII. Analysis methods according to research subjects in the hospitality

finance research



	Sum of citations	Number of papers	Mean of citations	Hospitality finance research
Journal				illiance research
JHTR	85	26	3.3	
IJHM	148	33	4.5	
ĬJCHM	44	12	3.7	
Cornell	183	42	4.4	491
Period				
1990-1994	120	22	5.5	
1995-1999	128	19	6.7	
2000-2004	128	29	4.4	
2005-2009	84	43	2.0	
Subject				
Bankruptcy	59	10	5.9	
CEO compensation and performance	7	2	3.5	
Capital budgeting	10	2	5.0	
Capital structure	45	7	6.4	
Dividend	3	2	1.5	
Financial performance/measurement	31	6	5.2	
Financing	32	13	2.5	
IPO	4	2	2.0	
Investment	16	7	2.3	
Leasing	12	3	4.0	
M&A	30	7	4.3	
Ownership structure	8	3	2.7	
REITs/real estate finance	10	6	1.7	
Risk management	81	20	4.1	
Stock market	14	6	2.3	
Valuation	51	10	5.1	
Qualitative/quantitative				
Qualitative				
1990-1994	77	4.5	17	
1995-1999	92	7.1	13	
2000-2004	20	2.0	10	
2005-2009	5	1.3	4	
Subtotal	194	4.4	44	
Quantitative				
1990-1994	43	8.6	5	
1995-1999	36	6.0	6	
2000-2004	108	5.7	19	M 11 1777
2005-2009	79	2.0	39	Table VIII.
Subtotal	266	3.9	69	The number of citations for hospitality finance
Note: The number of citations was co	ollected from Google	Scholar		papers

few topics, such as risk management, financing, valuation and bankruptcy. Also, these papers mainly examined US hotel firms. In terms of statistical methods used in hospitality finance research, most studies provided descriptive statistics and the majority used regression analysis. Also, during the first decade of the sample period, the qualitative studies were the majority but since the new millennium quantitative



studies have become the major stream of the hospitality finance research. In terms of citation, finance subjects providing fundamental theory and background, such as capital structure, have been cited more often.

Consequently, hospitality finance research needs to further diversify its research subjects and apply more rigorous and diverse statistical analysis methods. Further, future hospitality finance studies should diversify their target industry and country, which can make the findings more generalizable. In particular, in order to enrich and strengthen the fundamentals of hospitality finance research, less commonly studied subjects such as capital budgeting, dividends, and IPO should be investigated further.

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Appendix

Hospitality finance research

-	Journal	Title	Year	h ou	A (1
		Title	1 Cai	HOI	Autl
	Cornell	Debt hitch-hiking: how hotels found low-cost	1990	Arbel, A. and Woods, R.H.	1
493	IJCHM	capital Mergers, acquisitions and alliances in the European hospitality industry	1990	Crawford-Welch, S. and Tse, E.	2
	Cornell	The Marriott divestment: leaving the past behind	1990	Muller, C.	3
r	<i>IJCHM</i>	Do corporate failure prediction models work?	1991	Adams, D.J.	4
	Cornell	Restaurant valuation: a financial approach	1991	Fisher, D.P.	5
!	Cornell	How near the edge? Gauging lodging firms' liquidity	1991	Swanson, G.	6
r	IJCHM	The banking sector and small firm failure in the UK hotel and catering industry	1992	Boer, A.	7
	Cornell	Pure price changes of lodging properties	1992	Corgel, J.B. and Deroos, J.A.	8
	Cornell	Hotel F&B leases: the view from the restaurant	1992	Goldman, K.L. and Eyster, J.J.	9
	Cornell	Property-tax valuation of lodging properties	1992	Lesser, D.H.	
	Cornell	Seven current hotel-valuation techniques		Rushmore, S.	11
	Cornell	The valuation of distressed hotels		,	12
	Cornell	Bankruptcy and hospitality operations: who wins?	1992	Urdang, B.S.	13
	IJHM	The ADR rule-of-thumb as predictor of lodging property values	1993	Corgel, J.B. and Deroos, J.A.	14
!	Cornell		1993	Lesser, D.H. and Rubin, K.	15
	IJHM	Operational analysis: a case study of two hotels in financial distress	1993	Moncarz, E.S. and Kron, R.N.	16
r	<i>IJCHM</i>	A question of size	1993	Peacock, M.	17
	Cornell	Financial analysis using the statement of cash flows	1993	Schmidgall, R.S., Geller, A.N. and Ilvento, C.	18
	IJHM	Use of macroeconomic variables to evaluate selected hospitality stock returns in the US	1994	Barrows, C.W. and Naka, A.	19
	Cornell	Buying high and selling low in the lodging- property market	1994	Corgel, J.B. and Deroos, J.A.	20
r	IJCHM	Acquisitions, shareholder wealth and the lodging sector: 198	1994	Kwansa, F.A.	21
	JHTR	Determinants of capital structure choice and empirics on leverage behavior: a comparative	1994	Sheel, A.	22
	IJHM	analysis of hotel and manufacturing firms Initial public offerings in the gaming industry: an empirical study	1995	Atkinson, S.M. and Lebruto, S.M.	23
	Cornell	Investment values of lodging property	1995	Deroos, J.A. and Rushmore, S.	24
	IJHM	Potential impact of the proposed tax withholding on gaming operations: a utility analysis	1995	Gu, Z.	25
!	Cornell	Venture capital in the restaurant industry	1995	Hudson, B.T.	26
	IJHM	Bankruptcy cost and capital structure: the significance of indirect cost		Kwansa, F.A. and Cho, M.H.	27
!	Cornell	Financial characteristics of bed-and-breakfast inns	1995	Poorani, A.A. and Smith, D.R.	28
Table AI.	Cornell	Measuring lodging-property performance	1996	Deroos, J.A. and Corgel, J.B.	29
List of hospitality finance	Cornell ntinued)	Investment values of lodging property			



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Autl	nor	Year	Title	Journal
31	Ozer, B.	1996	An investment analysis model for small	IJCHM
32	Atkinson, S., Kelliher, C. and Lebruto, S.	1997	hospitality operations Capital-budgeting decisions using "crystal ball"	Cornell
	Rushmore, S. and Goldhoff, G. Schmidgall, R.S., Damitio, J.W. and Singh, A.J.	1997 1997	Hotel value trends What is a capital expenditure?	Cornell Cornell
	Beals, P. and Arabia, J.V. Borde, S.F. Harris, P.J. and Brown, J.B.	1998	Lodging REITs Risk diversity across restaurants Research and development in hospitality	Cornell Cornell IJHM
38	Kim, W.G. and Arbel, A.	1998	accounting and financial management Predicting merger targets of hospitality firms (a Logit model)	IJHM
39	Borde, S.F., Byrd, A.K. and Atkinson, S.M.	1999	Stock price reaction to dividend increases in the hotel and restaurant sector	JHTR
40	Kim, K.H. and Olsen, M.D.	1999	Determinants of successful acquisition processes in the US lodging industry	IJHM
41	Singh, A.J. and Kwansa, F.A.	1999	Financing the lodging industry in the next millennium	IJHM
42	Chow, C.W., Wright, P.L. and Haddad, K.H.	2000	Increasing the effectiveness of hotel's investments	Cornell
43	Dalbor, M.C. and Andrew, W. P.	2000	Agency problems and hotel appraisal accuracy: an exploratory study	IJHM
45 46	Elgonemy, A.R. Ganchev, O. O'Neill, J. and Rushmore, S. Ozer, B. and Yamak, S.	2000	The pricing of lodging stocks: a reality check Applying value drivers to hotel valuation Refining estimates of hotel-financing costs Self-sustaining pattern of finance in small businesses: evidence from Turkey	Cornell Cornell Cornell IJHM
	Pernsteiner, C. and Gart, A. Singh, A.J. and Schmidgall, R.S.		Why buyers pay a premium for hotels Financing lodging properties	Cornell Cornell
50	Canina, L., Advani, R., Greenman, A. and Palimeri, I.	2001	Dividend policy in the lodging industry	JHTR
51	Upneja, A. and Schmidgall, R.	2001	Equipment leasing in the US lodging industry: what, why, and how much	Cornell
52	Dalbor, M.C. and Upneja, A.	2002	Factors affecting the long-term debt decision of restaurant firms	JHTR
53	Elgonemy, A.R.	2002	Debt-financing alternatives: refinancing and	Cornell
54	Gu, Z.	2002	restructuring in the lodging industry Analyzing bankruptcy in the restaurant	IJHM
55	Ismail, J.A., Dalbor, M.C. and	2002	industry: a multiple discriminant model Using RevPAR to analyze lodging-segment	Cornell
56	Mills, J.E. Jang, S. and Yu, L.	2002	variability Analysis of return on hotel investment: a comparison of commercial hotel companies and	JHTR
57	Kim, H., Gu, Z. and Mattila,	2002	casino hotel companies Hotel real estate investment trusts' risk features	JHTR
58	A.S. Quan, D.C., Li, J. and Sehgal, A.	2002	and beta determinants The performance of lodging properties in an investment portfolio	Cornell

Table AI. (continued)



Autl	nor	Year	Title	Journal	Hospitality finance research
59	Canina, L. and Gibson, S.	2003	Understanding first-day returns of hospitality initial public offerings	Cornell	imance research
60	Corgel, J.B. and Deroos, J.A.	2003	Buying high and selling low in the lodging- property market	Cornell	
61	Corgel, J.B. and Deroos, J.A.	2003	Buying high and selling low revisited: the "quiet industry"	Cornell	495
62	Gu, Z. and Kim, H.	2003	An examination of the determinants of hotel REITs' unsystematic risk	JHTR	
63 64	Haywood, K.M. Kim, H. and Gu, Z.		Hotel investment in Canada: gaining perspective Risk-adjusted performance: a sector analysis of restaurant firms	IJCHM JHTR	
65	Oak, S. and Andrew, W.P.	2003	Evidence for weak-form market efficiency in hotel real estate markets	JHTR	
66	Dalbor, M.C. and Upneja, A.	2004	The investment opportunity set and the long- term debt decision of US lodging firms	JHTR	
67	Gu, Z. and Choi, Y.H.	2004	CEO compensation determinants in the casino industry	JHTR	
68	Kim, H. and Gu, Z.	2004	Financial determinants of corporate bond ratings: an examination of hotel and casino firms	JHTR	
69	Pratten, J.D.	2004	Examining the possible causes of business failure in British public houses	IJCHM	
70	Roubi, S. and Litteljohn, D.	2004	What makes hotel values in the UK? A hedonic valuation model	IJCHM	
71	Chen, M.H., Kim, W.G. and Kim, H.J.	2005	The impact of macroeconomic and non-macroeconomic forces on hotel stock returns	IJHM	
72	Corgel, J.B. and Gibson, S.	2005	The use of fixed-rate and floating-rate debt for hotels	Cornell	
73	Kim, H. and Gu, Z.	2005	A preliminary examination of determinants of CEO cash compensation in the US restaurant industry from an agency theory perspective	JHTR	
74	Parsa, H.G., Self, J.T., Njite, D. and King, T.	2005		Cornell	
75	Jang, S. and Ryu, K.	2006	Cross-balance sheet interdependencies of restaurant firms: a canonical correlation analysis	IJHM	
76	Kim, H. and Gu, Z.	2006	Predicting restaurant bankruptcy: a logit model in comparison with a discriminant model	JHTR	
77	Kim, W.G.	2006	EVA and traditional accounting measures: which metric is a better predictor of market	JHTR	
78	Leung, W.K. and Lee, T.S.	2006	value of hospitality companies? Institutional investors and the Monday effect on	IJHM	
79	Tang, F.F., Xi, Y., Chen, G. and Wang, R.	2006	tourism stocks Ownership, corporate governance, and management in the state-owned hotels in the People's Republic of China	Cornell	
80	Wong, K.K.F. and Song, H.	2006	Do macroeconomic variables contain any useful information for predicting changes in hospitality stock indices?	JHTR	
81	Burgess, C.	2007		IJCHM	
				ntinued)	Table AI.



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Author Year Title Journal 82 Chen, M.H. 2007 Hotel stock performance and monetary IJHM conditions 2007 83 Chen, M.H. Macro and non-macro explanatory factors of *IJHM* Chinese hotel stock returns 2007 An investigation of the mean reversion of 84 Chen, M.H., Kim, W.G. and IJHM Chen, C.Y. hospitality stock prices towards their fundamental values: the case of Taiwan 85 Guilding, C. and 2007 Benchmarking hotel capital budgeting practices IHTR Lamminmaki, D. to practices applied in non-hotel companies Hsu, L.T. and Jang, S. 2007 The postmerger financial performance of hotel *JHTR* companies Lee, S. and Upneja, A. 2007 Does Wall Street truly understand valuation of JHTR publicly traded lodging stocks? Singh, A. and Upneia, A. Extent of hedging in the US lodging industry *IIHM* 89 Tang, C.H. and Jang, S. 2007 Revisit to the determinants of capital structure: a IIHM comparison between lodging firms and software firms Tsai, H. and Gu, Z. 2007 The relationship between institutional IJHM ownership and casino firm performance Tsai, H. and Gu, Z. 2007 Institutional ownership and firm performance: JHTRempirical evidence from US-based publicly traded restaurant firms 2008 Financing behaviors of hotel companies 92 Jang, S., Tang, C.H. and Chen, IJHM M.H. 93 Lee, S. 2008 Examination of various financial risk measures JHTR for lodging firms 94 Lee, S. and Upneja, A. 2008 Is capital asset pricing model (CAPM) the best *IJCHM* way to estimate cost-of-equity for the lodging industry? 95 Madanoglu, M., Erdem, M. 2008 Risk return and cost of equity of small and large IJHM and Gursov, D. casual-dining restaurants 96 Madanoglu, M., Lee, K. and 2008 Risk-return analysis of fast-food versus casual-IHTRKwansa, F.A. dining restaurants: who moved my cheeseburger? 97 Oak, S. and Dalbor, M.C. 2008 Institutional investor preferences for lodging IJHM stocks Singh, A. and Upneja, A. The determinants of the decision to use financial IHTR derivatives in the lodging industry Tang, C.H. and Jang, S. 2008 The profitability impact of REIT requirements: a IJHM comparative analysis of hotel REITS and hotel C-corporations 100 Chang, C. 2009 To hedge or not to hedge: revenue management Cornell and exchange rate risk 101 Chen, M.H., Kim, W.G. and 2009 The impact of government weekend policy **JHTR** Liao, C.N. changes and foreign institutional holdings on weekly effect of tourism stock performance 102 Diener, J.D. 2009 Hotel bankruptcies: here again – but with new Cornell 103 Graf, N.S. 2009 Stock market reactions to entry mode choices of IJHM multinational hotel firms (continued)

Table AI.



Auth	nor	Year	Title	Journal	Hospitality finance research
104	Jang, S. and Kim, J.	2009	Revisiting the financing behavior of restaurant firms: the firm-size perspective	IJHM	imanee research
105	Jang, S. and Tang, C.H.	2009		JHTR	
106	Karadeniz, E., Kandir, Y.S., Balcilar, M. and Onal, B.Y.	2009	profitability Determinants of capital structure: evidence from Turkish lodging companies	IJCHM	497
107	Kim, H. and Gu, Z.	2009		IJHM	
108	Koh, J.H. and Jang, S.	2009	Determinants of using operating lease in the hotel industry	IJHM	
109	Lee, S. and Kim, W.G.	2009		IJHM	
110	Singh, A.	2009		IIHM	
111	Singh, A.	2009		JHTR	
112	Weinbaum, D.	2009		Cornell	
113	Yang, J., Qu, H. and Kim, W. G.	2009		IJHM	Table AI.

Corresponding author

SooCheong (Shawn) Jang can be contacted at: jang12@purdue.edu

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