

Analyzing the Authorship of Information Technology Publications in Leading Hospitality and Tourism Journals

Rosanna Leung^a

Rob Law^b

^a Timmical Travel Services Ltd, Hong Kong
rosanna@timmical.com

^b School of Hotel & Tourism Management,
The Hong Kong Polytechnic University, Hong Kong
hmroblaw@polyu.edu.hk

Abstract

At present, the hospitality and tourism industries are largely relying on Information Technology [IT] applications for their businesses. This study selected six leading research journals in hospitality and tourism, including *Annals of Tourism Research* [ATR], *Journal of Travel Research* [JTR], *Tourism Management* [TM], *International Journal of Hospitality Management* [IJHM], *Cornell Hotel and Restaurant Administration Quarterly* [CQ], and *Journal of Hospitality & Tourism Research* [JHTR], as a database to analyze trends in IT research. A total of 4,031 full-length research papers have been published in these six research journals during the period 1985 to 2004. Excluding book reviews, research notes, editors' comments, readers' comments/rejoinders, and case studies, 185 entries of IT-related full-length papers were found. The number of full-length research papers had increased from 1,805 in the first studied decade (1985-1994) to 2,226 in the second studied decade (1995-2004). The number of published IT papers increased only slightly from 88 papers to 97 papers, representing a percentage decrease from 4.88% to 4.36%. While authors from the United States and the United Kingdom had contributed about 80% of all IT research papers during both decades, papers from the Asia Pacific region increased three-fold in the second decade. With intensified collaboration and the increasing complexity, difficulty, and comprehensiveness of research projects, multiple authorship has become increasingly common.

Keywords: hospitality and tourism research, authorship analysis

1 Introduction

In order to obtain the latest information on technology, many business executives are choosing to read trade journals for reference, as these trade journals provide some industrial-based evaluations of various technologies. Many of these analyses, however, are business oriented, and for this reason, could be biased. Articles in research journals can function as an important channel of information, which provide a source for scholastic and potentially unbiased analyses and evaluations of technologies.

Academic researchers continuously publish their research findings on IT developments. Taking these publications as a useful reference, tourism and hospitality executives can better formulate their business plans and operating procedures. In addition, policy makers can set up appropriate policies based on the business model as advocated in the research journal articles.

This study is to investigate the progress of full-length IT research papers published in leading hospitality and tourism journals. The major measures include geographical changes in the period 1995 to 2004, and where by whom these prior studies were conducted. As research projects have become more sophisticated, there has been a trend towards collaborative effort in research publications. Hence, this study also examines whether such a trend applies to IT research.

IT has been identified as not only enabling but also inducing changes (Werther & Klein, 1999). Similarly, Frew (2000) stated that the hospitality and tourism industries have emphasized IT in the past 20 years. In particular, computer operations have changed from a highly specialized subject in the past to a compulsory subject in universities at present. Knowing what has happened in the past two decades will help researchers and practitioners to understand historical patterns, and to predict future trends in IT development.

There are more than 70 research journals in hospitality and tourism. Among these journals, six are consistently rated as the leading research journals in the field. Moreover, these six journals have been published for more than 20 years, which can provide a reliable timeframe for data analysis.

This study selected these six research journals as the data source. All IT papers that were published in these journals were identified and their contents analyzed. Since only a very limited number of prior studies have analyzed IT publications, this paper is useful in that it examines what has been done in the subject in the past 20 years (i.e., from 1985 to 2004).

2 Literature Review

University faculty members are obligated to conduct research and publish their research findings in research journals (Schmidgall et al., 1996). Publishing research papers in top-tier journals is beneficial for the careers of the authors, and helps them to secure funding for their research. Weaver et al. (1990) conducted a study to identify 20 active universities and their authors, based on 128 articles in four research journals in the period 1983 to 1988. Sheldon (1991) conducted an analysis of authorship in three tourism journals during a period from 1980 to 1989, and Jogaratnam et al. (2005) replicated this study during the timeframe of 1992 to 2001. These research studies identified the rankings of the most productive universities, the ratio of one-time authors, moderately and frequently contributing authors, and contributions by geographic location. The studies by Rutherford and Samenfink (1992) and Samenfink and Rutherford (2002) also identified the most productive authors.

Technology has become more complex and research has become more sophisticated, many research projects are being performed by a team of researchers rather than by individual researchers. Since IT is now one of the most important business components, it is impossible to separate IT from operations. Hence, when scholars work on a research project, they might find that IT is merely part of the project, and that they might be required to work with other scholars who possess expertise in IT. As indicated by Roberts (1998), a research project is usually conducted by a group of faculty members with various specialties in order to achieve more comprehensive results. In other words, co-authorship and multiple-authorship are encouraged.

3 Methodology

This study reveals the changes in IT publications in three hospitality and three tourism journals in the past 20 years. Based on previous studies on the rating of journals (Baloglu & Assante 1999; Bowen & Sparks 1998; Chon et al. 1989; Crawford-Welch 1992; Ferreira et al. 1994; Howey et al. 1999; O'Connor & Murphy 2004; Pechlaner et al. 2004), six leading journals in the fields of hospitality and tourism were selected for this study. These journals included ATR, JTR, TM, IJHM, CQ, and JHTR. This research only analyzed full-length papers, and excluded book reviews, research notes, abstracts, editors' comments, readers' comments, case studies, conference reports/reviews/proceedings, rejoinders, and viewpoints. In the period from 1985 to 2004, these six journals published a total of 4,031 full-length research papers, of which 185 were IT-related.

During this study interval, JHTR underwent several changes in name, including

Hospitality Education & Research Journal from 1985 to 1989; *Hospitality Research Journal* from 1990 to 1997, and *Journal of Hospitality & Tourism Research* since 1998. For convenience, these journals are all referred to JHTR in this study.

During the analysis, for a paper co-authored by more than one person, the occurrence of authors would be calculated in two ways: i) total occurrence and ii) adjusted occurrence. In the adjusted occurrence counting approach, a percentage sharing method was used to compute the relative, instead of absolute, occurrence of authors and institutions. Although the leading author might have contributed more than the other authors, an equal weight was used due to the impracticality of identifying the degree to which each author contributed. In the total occurrence approach, each author and the affiliated institute of the article received one point for each appearance (Heck & Cooley, 1988).

4 Findings and Discussions

4.1 Analysis of Journals

A total of 4,031 full-length papers were published in the selected research journals in the period 1985 to 2004. CQ, at 901, had the largest number of research papers, 901. The second-largest number of publications, 827, appeared in ATR, followed TM with 696 papers, JTR with 612 papers, JHTR with 576 papers, and IJHM with the fewest papers at 419.

Among the six research journals, CQ had the highest ratio of published IT papers. Within the study period, 68 research papers on IT were published in CQ out of a total of 901 papers (7.55%); followed by JHTR and IJHM, which published 37 and 26 papers on IT out of a total of 576 and 419 research papers, respectively (6.62% and 6.21%). TM and JTR published 696 and 612 papers, of which 29 and 22 were IT-related (4.16% and 3.59%). ATR had the smallest proportion of published IT papers, with only four out of 827 papers being IT-related (0.48%). (Table 1)

Table 1. Ratio of IT papers in each research journal

Journal	No. of Research Papers (a)	No. of IT papers (b)	(b) / (a)	(b) / (c)
ATR	827	4	0.48%	2.16%
IJHM	419	25	5.97%	13.51%
CQ	901	68	7.55%	36.76%
JHTR	576	37	6.42%	20.00%
JTR	612	22	3.59%	11.89%
TM	696	29	4.17%	15.68%
Total	4,031	185 (c)	4.59%	100.00%

On average, the hospitality journals and tourism journals published 6.5 and 2.75 IT papers per year. During the study period, at least three IT papers were published in hospitality journals annually, but there were four years when no IT paper was published in tourism journals (1987, 1994, 1995, and 2001). Out of the 185 IT papers, 29.73% were published in tourism journals and 70.27% were published in hospitality journals.

4.2 Distribution of IT papers

The total number of research papers in all six journals increased from 146 papers in 1985 to 236 papers in 2004 (Fig. 1). Meanwhile, the number of papers on IT also increased from six in 1985 to 13 in 2004. Generally speaking, a trend was observed of an increase in the number of papers on IT over the study period. The most productive years were 1993 and 2000, with 15 and 16 IT papers published (8.11% and 8.65%), respectively. However, in 1994, 1995, and 1997, the number of published papers on IT dropped to four per year (2.16%). One possible reason for the decrease in publications in those years could be the holding of the ENTER Conference by The International Federation for IT and Travel & Tourism (IFITT) in 1994. The ENTER Conference is the world's leading conference in tourism and IT, and attracts a large number of research papers on IT away from research journals (IFITT 2005). Moreover, with the first issue of *Information Technology & Tourism*, the research journal of IFITT, published in 1998; and *International Journal of Hospitality Information Technology*, published in 1999, many research papers on IT were published in these IT-specialized journals.

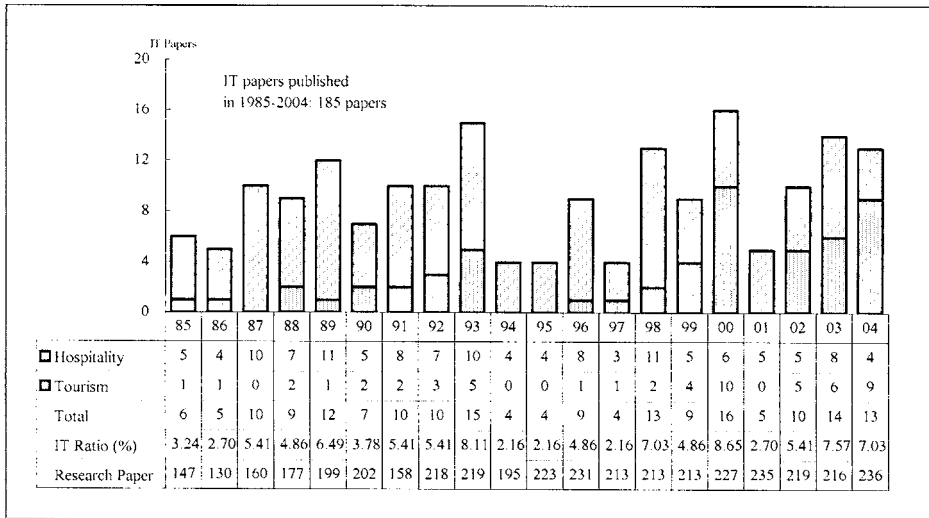


Fig. 1. Distribution of papers on IT from 1985-2004

4.3 Hospitality vs. Tourism Research Journals

The number of full-length research papers published in tourism and hospitality journals was 2,135 and 1,896 respectively. Of these papers, 55 and 130 were IT related. Although the tourism journals published 239 more research papers than hospitality journals, they published 75 fewer papers on IT than the hospitality journals. In other words, 6.86% of IT papers were published in hospitality journals, but the corresponding figure for tourism journals was only 2.57%.

4.4 Countries of Author-related Institutes

From the information that was collected, there was no difference in the journals occupying the first four rankings by total appearance and adjusted appearance (Table 2). The United States was the most productive country, contributing 125.22 IT papers (67.69% of the total number of IT papers). The United Kingdom ranked second with 22.75 IT papers (12.30% of the total number of IT papers). Australia was the third on the list with 7.33 papers (3.96% of the total number of IT papers), and Hong Kong ranked fourth with 5.83 published papers on IT (3.15% of the total number of IT papers).

Table 2. Distribution of countries of author-related institutes

Country	Adjusted Appearances		Total Appearances	
	No of Papers	Rank	No of Papers	Rank
U.S.	125.22	1	246	1
U.K.	22.75	2	34	2
Australia	7.33	3	15	3
Hong Kong	5.83	4	13	4
Canada	4.50	5	7	7
Austria	3.83	6	7	7
Israel	3.50	7	8	6
Taiwan	3.33	8	5	9
Spain	3.00	9	10	5
France	1.25	10	3	10
Greece	1.25	10	3	10
Barbados	1.00	12	1	12
India	0.50	13	1	12
Malaysia	0.50	13	1	12
Not Available	0.33	15	1	12
New Zealand	0.33	15	1	12
Italy	0.25	16	1	12
Switzerland	0.25	16	1	12
Total	184.95	-	358	-

4.5 Authorship

4.5.1 Distribution of the Contributions of Authors

In this study, there were 253 contributing authors of IT papers (Table 3). Using adjusted appearance, 178 of the authors had written less than 1 research paper (70.36%). Sixty-one authors had written 1 to 1.99 research papers (24.11%) and 13 authors had prepared 2 to 3.99 papers (5.14%). Only 1 author had written more than five IT papers (0.40%). The average yield per author was 1.42 papers, with a standard deviation of 0.99 when total appearance was used. When adjusted appearance was used, the corresponding figure dropped to 0.73 with a standard deviation of 0.63.

Table 3. Distribution of the contributions of authors

Author Paper Contributions	Adjusted Appearance	Total Appearance
5.00 and above	1	5
4.00 – 4.99	0	3
3.00 – 3.99	3	14
2.00 – 2.99	10	40
1.00 – 1.99	61	191
Below 1.00	178	-

4.5.2 Distribution of the Contributions of Institutes

In this study, there were 111 contributing institutes (Table 4). Thirty-eight of the institutes had prepared less than one research paper (34.23%). When total appearance was considered, the average yield per institute was 3.23 with a standard deviation of 5.13. The yield, however, dropped to 1.66 with a standard deviation of 2.37 when adjusted appearance was used.

Table 4. Distribution of the contributions of institutes

Number of Institutes for IT Paper Contributions	Adjusted Appearance	Total Appearance
10.00 and above	2	8
9.00 – 9.99	0	1
8.00 – 8.99	0	5
7.00 – 7.99	0	3
6.00 – 6.99	2	1
5.00 – 5.00	4	3
4.00 – 4.99	5	4
3.00 – 3.99	2	9
2.00 – 2.99	8	16
1.00 – 1.99	51	61
Below 1.00	37	-

Single Authorship and Multiple Authorship

There were a total of 253 authors of 185 papers on IT during the entire studied

period. Of these papers, 75 were written by single authors and 110 papers were written by multiple authors (Table 5). There were more papers written by single authors during the first decade (51 papers). In the second decade, co-authorship had become more common, and the number of papers written by single authors had dropped to 24 (a decrease of 52.94%). Meanwhile, papers written by three and four authors increased 3.7-fold and 10-fold. Fig. 2 presents a diagrammatical representation of single versus multiple authorships.

Table 5. Paper count by number of authors

	1985-1994	1995-2004	Change %	Total
1 Author	51	24	-50.94%	75
2 Authors	28	36	+28.75%	64
3 Authors	7	26	+271.43%	33
4 Authors	1	10	+900.00%	11
5 Authors	0	1	+100.00%	1
6 Authors	1	0	-100.00%	1
Total	88	97	-	185

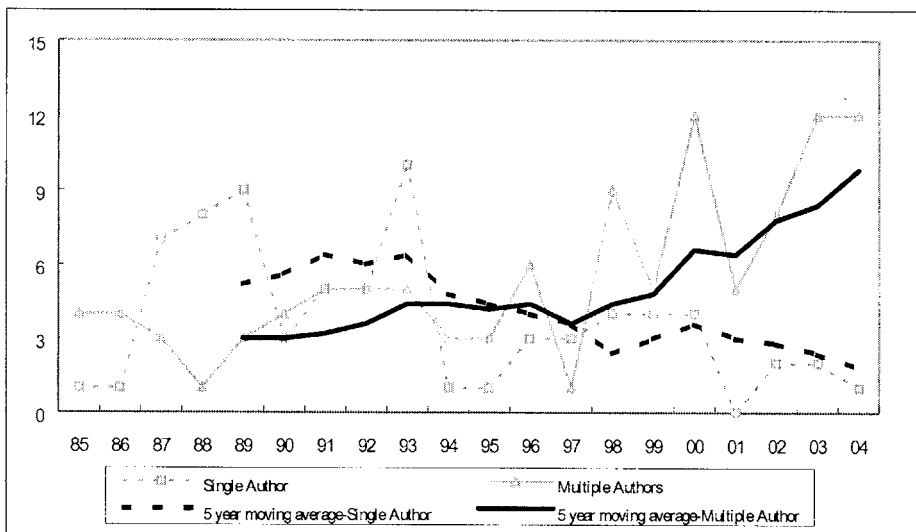


Fig. 2. Trends in single and multiple authorships of IT papers

The change in authorships from single authors to multiple authors was seen in both hospitality journals and tourism journals. In hospitality journals, multiple authorship has become more common since 1991 (Fig. 3).

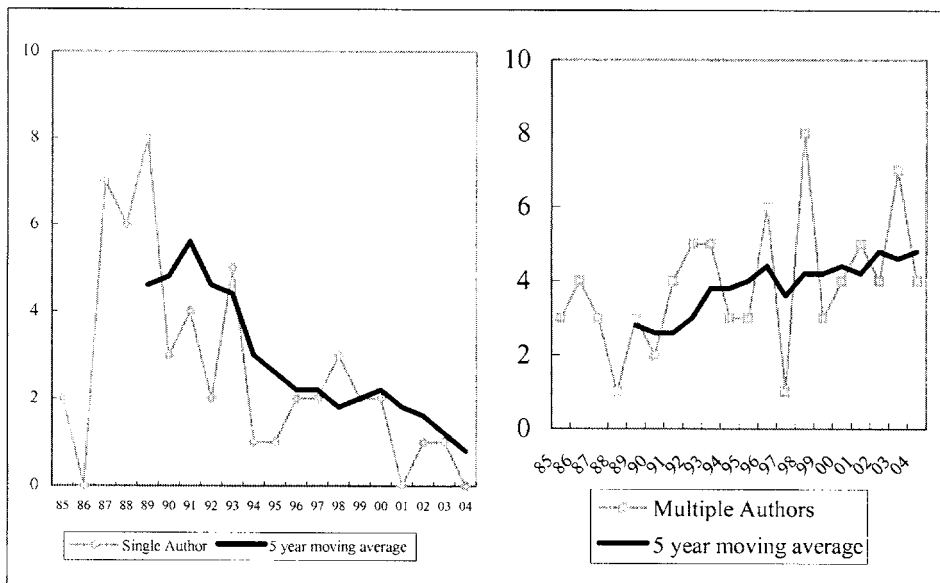


Fig. 3. Trends of single and multiple-authorship in hospitality journals

In tourism journals, single authorship did not show a trend of increase or decrease. However, an upward trend in multiple-authorship since 1997 can be observed (Fig. 4).

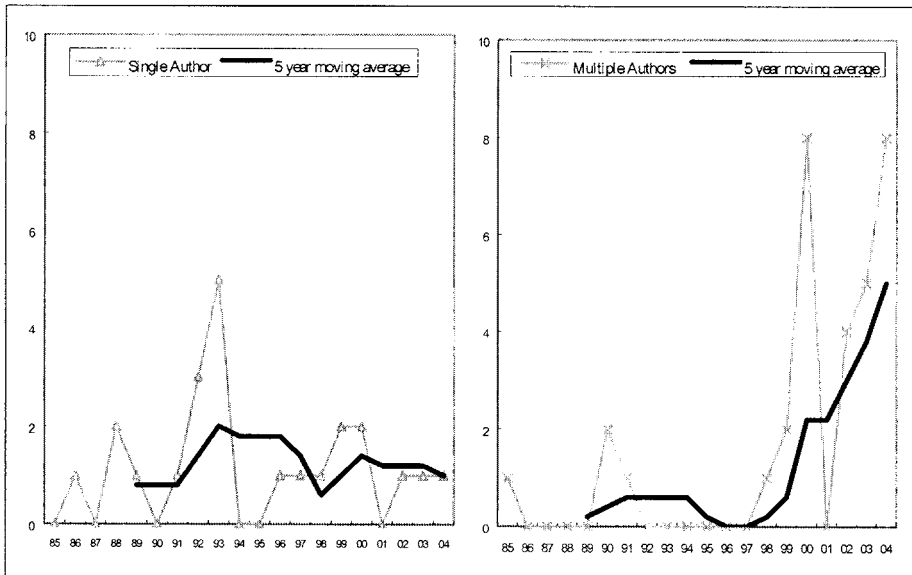


Fig. 4. Trends of single and multiple-authorship in tourism journals

5 Implications

As there was very limited research on analyzing hospitality & tourism IT authorship performance, this study can serve as a reference on what have been done on IT areas in the period 1985-2004. According to the findings of this study, the majority of the IT research publications were done in North America and United Kingdom. Researchers in other regions should be more actively researching in this promising field. For instance, with the rapid growth of the Asian tourism industry, more research should be done by researchers in Asia to investigate the local needs.

Moreover, IT plays an important role in business environment so researchers should not purely focus on IT projects but also need to work with business researchers to examine how IT can enhance the operation efficiency and effectiveness.

6 Conclusions

As IT has become more important, it has been widely used in the hospitality and tourism industries to improve operational efficiency, reduce costs and, more importantly, to enhance the quality of services. Poon (1993, p. 8) stated that “a whole system of ITs is being rapidly diffused throughout the tourism industry and no player will escape its impacts.” In this study, the percentages of published IT papers in the selected journals were still low over the entire period of study. This, in turn, indicates that more quality research projects need to be conducted.

There was an increase in the total number of published research papers, from 146 in 1985 to 236 in 2004. This trend of increase is also seen in the number of published papers on IT, from 5 in 1985 to 13 in 2004. In 2000, the number of published IT papers reached a record of 16. The empirical findings also indicate that CQ was the journal that published the most papers on IT, whereas ATR was the journal that published the fewest. Moreover, hospitality journals (70.27%) published more IT papers than tourism journals (29.73%). Nevertheless, tourism journals have recently published more IT papers, narrowing the gap between journals in the two fields in this regard.

IT research projects have been dominated by researchers from North America, especially in the hospitality area (81%). However, an increasing number of researchers from the Asia Pacific region have been publishing papers on IT in leading tourism and hospitality journals, increasing from 4.55% of such contributions in the first decade to 14.27% in the second decade, representing a three-fold increase.

Lastly, the research findings showed that more research articles are being written by multiple authors. Such a change is likely due to the increasing complexity, difficulties, and comprehensiveness of research projects, which require more collaborative efforts and diverse skills.

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