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Abstract

Revenue management (RM), the collection of strategies that firms use to scientifically manage demand for their products and services, is considered as one of the most successful application areas of operations research. This systematic literature review (SLR) explores revenue management techniques in the hospitality and tourism. Such techniques include dynamic pricing algorithms, forecasting demand with urbane statistical models, overbooking strategies, ancillary revenue optimization, and the impact of behavioral economics on pricing decisions. The study conducted an SLR using the PRISMA model and identified 365 Scopus indexed documents. Descriptive analyses, citation analysis, co-citation analysis, and keyword co-occurrence analysis were used to investigate the intellectual structure of the revenue management literature. Findings showed that the concept of RM has been globally examined since 1989 with greater interest over time. According to co-citation analysis, three schools of thought are identified, including customer orientation, operational performance, and revenue management technique. Most highly influential documents are conceptual papers. Results also reveal that 6 dominant topics in the research field of RM such as dynamic pricing, tourism, hotel, hospitality, machine learning, and consumer behavior, have recently been examined in the literature. This review concludes that RM techniques can significantly improve price optimization and foster data-driven decision making in the management of businesses in the hospitality sector. Limitations of RM strategies such as the potential lack of understanding of specific hospitality contexts, reliance on outdated data, and challenges in accurately forecasting demand and managing distribution channels are also discussed. Similarly, there can be disconnect between theoretical models and practical application, especially regarding human resources and the impact of external factors like economic conditions. It also suggests future research directions for further enhancing RM techniques and pricing optimization in the hospitality and tourism consulting.

Keywords: *Revenue Management, Pricing Optimization, Hospitality, Tourism Consulting, Systematic Literature Review*

1.0 Background of the Study

Revenue management (RM) forms one of the most widely utilized management philosophy in the hospitality industry. The RM concept was initiated in the airline industry and has been a subject of interest to hospitality and tourism researchers mainly since the 1990s (Denizci-Guillet, 2020). This management philosophy applies to services in industries with fixed capacity that cannot adapt production to demand such as hospitality, transportation, car rental among others (Ara, Foysal, Huda & Bairagi, 2022). Organizations in such industries must also contend with the perishability of their inventories, whether that consists of hotel rooms, airline seats, restaurant dining hours, or tee times on golf courses (Kimes, 1989; Kimes, 2000; Kimes, 2004). The limited shelf-life of such companies' product implies that the unsold inventory cannot be resold in the future (Subying & Yoopetch, 2023).

Enterprises in such industries therefore face continuous challenge of balancing the sales price and inventory to minimize unused resources and maximize revenue (Binesh, Belarmino & Raab, 2021). Effective revenue management is vital for companies in this industry to attain year-round profitability despite fluctuating demand (Kimes, 1989; Talón-Ballesterro et al, 2023). Revenue management is recognized as a multidisciplinary topic, and its practices cut across multiple subject areas, including marketing, strategy, and consumer behavior (Denizci-Guillet & Mohammed, 2015). In the hospitality industry, the definition of RM is derived from the seminal paper of 1989 by Kimes as the process of allocating the right type of capacity to the right kind of customer at the right price so as to maximize revenue or yield (Ara et al, 2022; Kimes, 1989; Subying & Yoopetch, 2023). Core RM strategies in the hospitality sector have been specified as business analysis, pricing strategy, demand modeling and forecasting, inventory and price optimization, setting booking controls, distribution channel management, and performance analysis and evaluation (Ozmec-Ban et al, 2022; Schwartz et al, 2025; Talón-Ballesterro et al, 2023).

In addition, reviews on RM strategies not only focus on specific business types (such as hotels), but each review limited its search scope in many ways. For instance, Denizci-Guillet & Mohammed (2015) searched three online databases, including EBSCO, ScienceDirect, and ProQuest Business, and also limited the search to only selected journals in the hospitality and tourism field, with analysis of 158 documents. In another systematic review of hospitality revenue management with similar search criteria by Denizci-Guillet (2020), 343 documents were analyzed. In another meta-analysis in the hotel industry by Binesh et al (2021) that used only four databases (EBSCO, ScienceDirect, Tourism and Hospitality Complete, & ProQuest), 134 articles were identified, but only 76 articles were eligible for further analysis. While the bibliometric review of Raza, Ashrafi and Akgunduz (2021) has a broader search criterion, it only reviews articles on airline revenue management.

This article therefore attempted to review more literature on a holistic multi-business review of research on revenue management in the tourism and hospitality industry that also encompasses airlines, hotels, restaurants, and other tourism enterprises. This is in view of the fact that revenue management is a multidisciplinary topic that cuts across various subject areas of business and management (Subying & Yoopetch, 2023). The approach adopted by this paper offers another crucial perspective on the intellectual structure of the revenue management literature in the tourism and hospitality industry.

2.0 Literature Review

This systematic review of research used systematic method to analyse the literature on revenue management in the tourism and hospitality industry. This review addresses the following research questions:

What are the most frequently investigated research topics in the revenue management literature in the tourism and hospitality industry and how has the trend of topical focus shifted over time

What do the breadth, trends, growth trajectory and geographic distribution of the literature on revenue management in the tourism and hospitality industry look like?

What are the existing schools of thought in literature with regards to how different revenue management strategies impact seasonality, competitor pricing, booking patterns, effectiveness of different pricing promotions for hotels and airlines?

This review analyzed 365 Scopus-indexed documents using the bibliometric review method. As this study aimed to review the literature on revenue management across the tourism and hospitality industry published in both journals inside and outside of the tourism and hospitality field, the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) method was selected as it allowed for a large number of documents to be reviewed (Moher et al, 2009). Systematic literature analyses included descriptive statistics, citation, co-citation, and keyword co-occurrence analysis using Microsoft Excel 16.77.1. This systematic review provides an overview of the landscape of 32 years of literature on revenue management across the tourism and hospitality industry. Unlike many recently published reviews, this paper included documents from journals inside and outside the tourism and hospitality field to understand revenue management from a multidisciplinary perspective. Additionally, while many recent reviews excluded airlines in their review, this study also included documents on RM in airlines for review along with other businesses in the tourism and hospitality industry. Therefore, this review gives scholars in this field a broader view of the literature on RM in the tourism and hospitality industry in the aspects of growth trajectory, geographic distribution, intellectual domains, themes and linkages among top-cited authors, and the trend of frequently examined topics relating to revenue management.

3.0 Methodology

This study employed the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) methodology to systematically examine trends, intellectual structures, and frequently discussed topics in revenue management literature across the tourism and hospitality industry, utilizing a keyword search strategy through Scopus database due to its superior coverage of social science literature compared to Web of Science. The research operationalized revenue management using established definitions that characterize it as the process of selling appropriate capacity to suitable customers at optimal prices through correct channels at the right time, while incorporating demand forecasting and inventory configuration strategies. Two keyword sets were developed: the first encompassing "revenue management" along with related terms including dynamic pricing algorithms, demand forecasting with statistical models, overbooking strategies, ancillary revenue optimization, behavioral economics impacts, seasonality considerations, competitor pricing, booking patterns, and promotional effectiveness; the second set focused on contextual terms including "tourism," "hospitality," "airline," "hotel," and "restaurant" to capture the multidisciplinary nature of the field. The systematic search process began with 259 papers identified through Scopus using these keyword combinations, which were subsequently screened

using predetermined criteria that included journal articles, conference papers, books, and book chapters published in English from 1989 to 2025, ultimately resulting in 142 eligible documents after excluding 92 papers that did not meet the inclusion criteria. The analysis involved exporting metadata from 365 Scopus-indexed documents, including author information, publication details, affiliations, abstracts, journal names, keywords, and citation data, followed by data cleansing through thesaurus file creation to address text discrepancies such as variant author name formats and synonym keywords that could compromise analytical accuracy. Multiple analytical approaches were subsequently employed, including descriptive analyses to examine literature breadth, growth trajectories, and geographic distribution; science mapping techniques to visualize intellectual relationships; citation and co-citation analyses on both authors and documents to identify influential contributors and thematic linkages; author co-citation analysis to determine schools of thought by measuring citation frequency in reference lists; and keyword co-occurrence analysis as a text-mining technique to track keyword frequency patterns in titles, abstracts, and keyword fields, thereby enabling identification of frequently studied topics and temporal shifts in research focus across the revenue management literature in tourism and hospitality contexts.

4.0 Findings and Discussion

The analysis reveals that topics related to revenue management technique school of thought have been published in fewer studies but tend to have higher citations per document, while topics in customer orientation and operational performance have been published in a greater number of documents but with lower citations per document. This disparity can be explained by the fact that customer orientation and operational performance topics have published papers in many industry-specific research areas, whereas studies covering revenue management technique school of thought are more general and have greater possibility of being cited across various fields of study. Most studies on the top 20 list are associated with either pricing or capacity management, and more than half of the studies on the top 20 highest Scopus citations list are conceptual papers. Only two review papers are listed on the top 20 highest citations list, and only around 25 research reviews were identified from 365 documents, indicating a significant lack of reviews in revenue management research within the tourism and hospitality industry. The findings from document citation analysis align with document co-citation analysis results, demonstrating that more than half of the documents on the top 20 co-citation list are conceptual papers, with only three review papers on the list. Notable papers include Kimes (2000), cited by 148 articles, which establishes a framework for revenue-management strategy based on revenue per available tee-time among golf-course operators, and Denizci-Guillet (2020), cited by 45 studies, which examined the evolution of revenue management research intellectual structure in hospitality and tourism between 1983 and 2018.

The 365 Scopus-indexed publications on revenue management in tourism and hospitality published between 1989 and 2025 reveal distinct publication patterns, with annual publications never exceeding 30 during the pre-2019 period, while from 2020 onwards; the lowest number of annual publications was 49. Annual publications significantly increased between 2019 and 2023, nearly doubling from 25 to 49 publications within one year, a trend attributed to IT advances and the increasing significance of online distribution channels. Regarding geographical distribution, the United States emerged as the key contributor with 136 publications from 1989-2019, while other countries like Canada, the United Kingdom, and China held 15 publications each, with remaining countries showing single-digit publications. However, from 2020 onwards, the literature became more global, with significant increases in publications from territories that had

already published studies before 2019. China increased its publications from 15 to 158, the United Kingdom from 15 to 77, and Germany from 3 to 54. New territories including the Middle East, Southeast Asia, and Eastern Europe began publishing studies from 1989 onwards, though Southeast Asia remains underrepresented despite tourism generating EUR 121 billion in 2018, accounting for 12.6% of its economy and creating 38.1 million jobs.

Author citation analysis highlights three schools of thought in revenue management literature: Customer Orientation (60 authors), Operational Performance (53 authors), and Revenue Management Technique (35 authors). The customer orientation school focuses on customer-related studies, with Kimes emerging as the most influential author whose 1989 seminal work defined revenue management in the hospitality industry. This school frequently applies revenue management in hospitality contexts, particularly hotels and restaurants, examining customer perceptions of fairness and acceptable practices. The operational performance school emphasizes organizational aspects including revenue optimization, inventory management, and pricing models, frequently discussed in airline business contexts, with studies developing algorithms for revenue generation and seat protection levels. The revenue management technique school focuses on mathematical calculations of models and algorithms with less application to specific businesses, producing highly cited conceptual papers on optimal dynamic pricing and perishable inventory problems. The highest cited study (Gallego & Van Ryzin, 1994) with 2295 citations represents a collaboration between leading authors in this school, while the most co-cited document (McGill & Van Ryzin, 1999) with 1835 citations bridges operational performance and revenue management technique schools.

The revenue management literature has become increasingly popular since 2008, as reflected by growing publications and expanding regional contributions, aligning with previous research attributing this growth to IT advances and online distribution channels. While US publications strongly influence the field through citation and co-citation analyses, contributions from other regions are becoming more significant, particularly from the Middle East, Southeast Asia, and Eastern Europe. The identification of three distinct schools of thought provides a broader perspective than previous reviews by examining intellectual knowledge across different businesses rather than focusing solely on hospitality industry. Authors from customer orientation and operational performance schools published more studies than those from revenue management technique school, but revenue management technique authors achieved higher citations per document due to their general applicability across various businesses. The analysis reveals a critical lack of review papers, with only 25 reviews identified from 365 documents, highlighting the need for more systematic reviews in this field. Six emerging topics were categorized into three themes: content (enhancing demand forecasting with machine learning in dynamic pricing), context (shift from airline to hospitality industry including hotels, restaurants, and tourism destinations), and disciplinary (shift from traditional marketing toward consumer behavior). The field demonstrates a transition toward more sustainable business approaches, becoming more customer-centric and long-term-oriented to sustain revenue rather than focusing on short-term profit from inventory optimization, evidenced by increased attention to consumer behavior, customer perception of fairness in pricing, and integration with customer relationship management.

5.0 Conclusion

This systematic review successfully achieved its three primary objectives by examining revenue management literature in tourism and hospitality from 1989 to 2025. The study demonstrated

continuous growth in academic output breadth and trends, with the growth trajectory significantly increasing in terms of publication numbers, while the United States dominated the field initially, significant publication increases were observed in Europe and Asia. The research identified three distinct schools of thought in revenue management research: customer orientation, operational performance, and revenue management technique, each contributing unique perspectives to the field's intellectual development. The topical focus has evolved from traditional yield management, industry management, and reservation systems toward contemporary themes including consumer behaviors, price dynamics, and tourism markets, reflecting the field's maturation and expanding scope.

6.0 Recommendations

Future research should examine revenue management applications in non-traditional business types beyond hotels, airlines, and restaurants, as the literature demonstrates expanding relevance across various tourism and hospitality sectors. Researchers should utilize consumer behavior theories to explain customer actions and reactions toward revenue management practices, addressing the current gap between consumer behavior studies and theoretical application in revenue management contexts. The field requires more systematic review papers to synthesize existing knowledge and highlight growth trends in revenue management approaches, given that only 25 reviews were identified from 365 documents analyzed. Future studies should incorporate cultural factors of customers in different regions and examine cultural differences relating to revenue management, particularly as the field becomes more globally examined. Scholars in Southeast Asia are encouraged to increase research output on revenue management in tourism and hospitality, considering the region's significant economic dependence on tourism and the current underrepresentation in academic literature. Researchers should consider including multiple databases beyond Scopus, incorporating documents published in languages other than English, and expanding business-specific keywords to capture a more complete picture of revenue management literature across diverse tourism and hospitality contexts.

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