

July 2021

The Power of E-commerce in the Hotel Industry

Nan Hua

University of Central Florida, nan.hua@ucf.edu

Wei Wei

University of Central Florida, wei.wei@ucf.edu

Ahmet Ozturk

University of Central Florida, Ahmet.Ozturk@ucf.edu



Part of the [Hospitality Administration and Management Commons](#)

Find similar works at: <https://stars.library.ucf.edu/rosen-research-review>

University of Central Florida Libraries <http://library.ucf.edu>

This Article is brought to you for free and open access by the Rosen College of Hospitality Management at STARS. It has been accepted for inclusion in Rosen Research Review by an authorized editor of STARS. For more information, please contact STARS@ucf.edu.

Recommended Citation

Hua, Nan; Wei, Wei; and Ozturk, Ahmet (2021) "The Power of E-commerce in the Hotel Industry," *Rosen Research Review*. Vol. 2 : Iss. 2 , Article 11.

Available at: <https://stars.library.ucf.edu/rosen-research-review/vol2/iss2/11>

THE POWER OF E-COMMERCE

In the hotel industry

With continuous developments in information technology leading to increasingly sophisticated and fickle customers, the hotel industry is under pressure to invest in e-commerce capabilities. But is it a worthwhile investment or are loyalty programs enough to drive profitable repeat visits? Dr. Nan Hua, Dr. Wei Wei, and Dr. Ahmet Ozturk from the Rosen College of Hospitality Management, University of Central Florida, investigate the synergy between e-commerce, customer loyalty programs, and hotel operating performance.

Over the last few decades, there have been momentous shifts in the way the hotel industry conducts its business, largely because of developments in information technology (IT). The industry saw the advent of computerised network systems and digital distribution channels in the 1960s, which led to a heavy reliance upon travel agencies. Today, it must embrace a digital landscape of branded websites, booking engines, online travel agents, social media, and multiple device use.

Customers today are better informed and more sophisticated in their needs than ever before, and they may expect and demand online transaction methods. In the highly competitive hotel industry, the effective use of e-commerce—where transactions and other activities take place entirely via the internet—is widely considered to be a key competence required for growth and an important way to gain sustainable advantage over competitors.

Many hotels are therefore integrating more IT capability into their core business offerings, aiming not only to enhance customer satisfaction, but also to increase operational efficiency through streamlining

processes. As well as establishing a transactional medium, e-commerce can reinforce online engagement with customers, communicate product offerings, and provide a customer service platform.

LOYAL CUSTOMERS ARE PROFITABLE CUSTOMERS

But whilst IT capability can enhance customer engagement, it can also make it easier for clientele to switch to an alternative hospitality supplier. Additionally, there are significant costs associated with attracting new customers, including commission paid to online travel agencies; this means breaking even for each individual customer takes longer as a result. Loyal customers are therefore more profitable customers, and this profitability grows alongside the longevity of the customer's relationship with the company.

Accordingly, many hotels offer loyalty programs in order to encourage the patronage of their existing customers through targeted, customised offers and rewards, and by effectively inducing switching costs, thereby discouraging disloyalty. Such schemes have been found to be beneficial and more effective than other sales and marketing methods in establishing and maintaining a loyal clientele base.

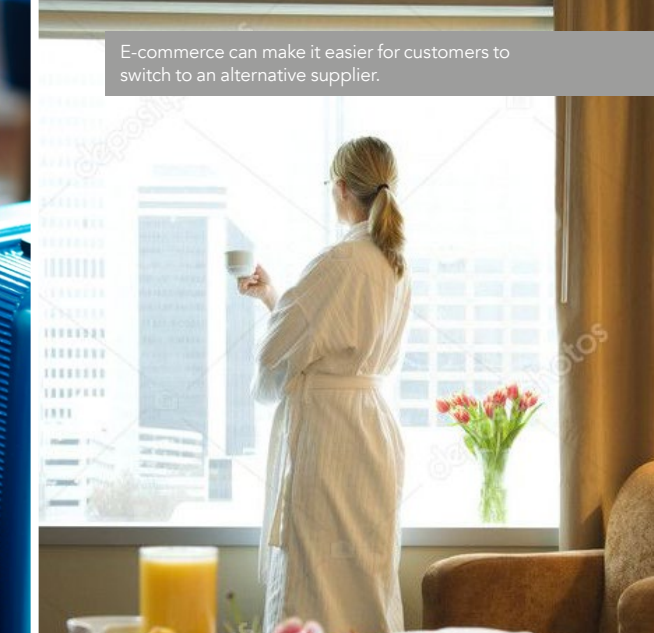
For example, a study conducted in 2018 by Dr. Nan Hua and Dr. Wei Wei from the Rosen College of Hospitality Management found that loyalty programs significantly improved hotel operations and performance. The study found that four key performance indicators—the percentage of available rooms occupied, the average daily rate, the revenue per available room, and the gross operating profit—were significantly and positively impacted by implementing loyalty schemes, and that investment in them is therefore a sensible expenditure for hotels.

ALLOCATING RESOURCES EFFECTIVELY

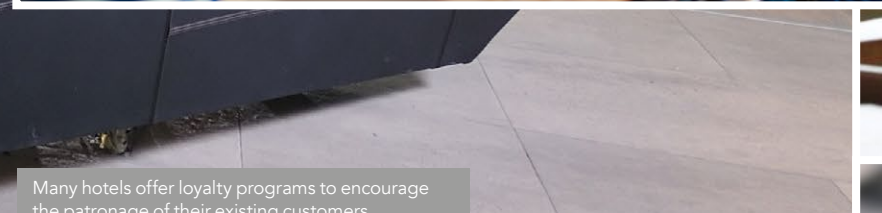
Although e-commerce and loyalty programs are separate entities, they are interdependent and mutually supportive, given that loyalty programs generate valuable information about customers that is embedded in IT resources such as databases and various systems. E-commerce activities can exploit these databases not only to target specific customers with bespoke product and service offers, but also more strategically to help hotels understand potential trends, and refine target markets. Therefore, Dr. Hua and Dr. Wei, together with colleague Dr. Ahmet Ozturk, have now turned their attention to the synergy between e-commerce and loyalty schemes, and whether investing in the former



More and more potential guests expect an online booking service.



E-commerce can make it easier for customers to switch to an alternative supplier.



Many hotels offer loyalty programs to encourage the patronage of their existing customers.

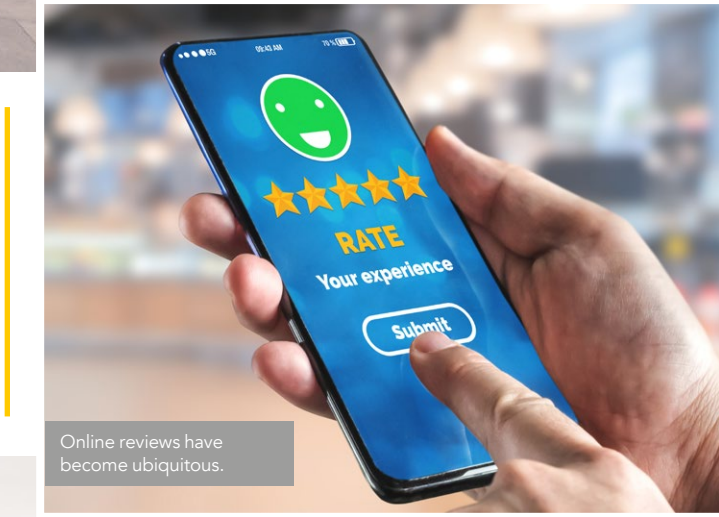


IN A COMPETITIVE ENVIRONMENT, THE NEED FOR HOTELS TO UNDERSTAND HOW E-COMMERCE AND CUSTOMER LOYALTY PROGRAMS INTERACT HAS BECOME VITAL.

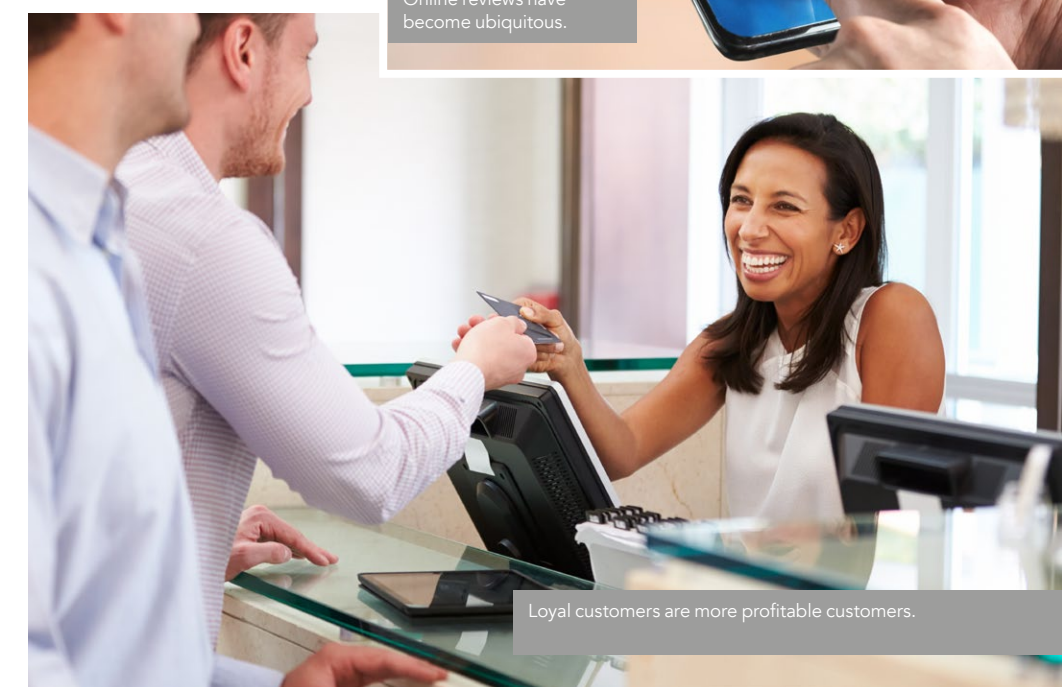
enhances the impact of the latter on hotel operating performance.

Whilst studies investigating e-commerce in the hotel industry have been conducted previously, none have looked specifically at the interactions between e-commerce, loyalty programs, and operating performance, and there is a lack of empirical data in this area. In a fiercely competitive environment and often with limited financial resources available, the need for hotels to understand how the three interact has become even more vital if they are to be able to allocate resources effectively.

With this in mind, Dr. Hua, Dr. Wei, and Dr. Ozturk proposed the following hypothesis for their study: 'e-commerce expenses moderate the relationship between hotel



Online reviews have become ubiquitous.



Loyal customers are more profitable customers.



The findings have important implications for strategic decision making in the hotel industry.

THERE IS A SIGNIFICANT VALUE-ADDED SYNERGY BETWEEN E-COMMERCE INVESTMENT AND LOYALTY PROGRAMS.

loyalty programs and hotel operating performance.' In other words, investing in e-commerce can directly affect the relationship between the loyalty program and the broader functioning of the hotel.

MODELLING THE SYNERGY

Building on a model previously developed by Dr. Hua et al in 2015, which examined the relationship between e-commerce expenses and hotel performance, the study was based on a sample of 1,569 hotels from the year 2006 to 2015, resulting in a total of 15,690 observations. The updated model was tested using seven components: rooms revenue, loyalty program expenses, expenses incurred for websites and IT related initiatives (e-commerce),

total franchise fees, franchise royalties, marketing and advertising, and other marketing expenses.

The research included variables which have been shown to be significant contextual determinants that influence hotel operating performance. The six variables were: rooms, franchise expense, franchise royalties, marketing and advertising expense, other marketing expenses and hotel type. A sensitivity test concerning hotel types was also conducted to determine whether the results the team obtained were robust for the hotel type variable.

The model produced a positive estimate result which showed that investing in

e-commerce positively moderated the relationship between hotel loyalty programs and operating performance by increasing the revenue from hotel rooms. This was found to be true even after hotel types were controlled for. For even further insight, the model was also tested by property type, and results showed that the impact of e-commerce is most prominent for hotels in suburban and airport locations.

IMPLICATIONS FOR DECISION MAKING

The team's findings illustrate that there is a significant value-added synergy between e-commerce investment and the impact of loyalty programs. More investment in e-commerce leads to more impactful loyalty programs and hence more revenue generated from rooms. The team surmised that the customer database resulting from loyalty programs is a likely key to this synergy. Together with its use in targeting customers with rewards and offers, it can also reduce overall marketing costs by providing insight into marketing strategies, as well as providing insight into areas that could be targeted for specialized advertising campaigns.

The findings have important implications for strategic decision making in the hotel industry. By demonstrating that increased investment in e-commerce capabilities impacts positively on revenue, owners and managers can plan their annual budget accordingly. This applies especially to hotels located close to airports or in suburban areas, for whom the results were notably pronounced, showing that taking advantage of e-commerce could improve the performance of these hotels in particular. As the results of the study were found to be robust across property types, they are relevant and valuable for smaller as well as larger hotels. They show that smaller establishments with limited resources can achieve the same synergy with proper resource allocation, indicating that e-commerce activities can provide a cheap and effective means of competing with larger corporations. All types of property within the hotel industry can benefit from the research carried out by the team at Rosen College and their findings can be used to adjust resource allocation strategies to improve performance.

RESEARCHERS IN FOCUS

RESEARCH OBJECTIVES

Dr. Nan Hua, Dr. Wei Wei, and Dr. Ahmet Ozturk investigate whether the impact of customer loyalty on financial performance depends on e-commerce investment in the hospitality industry.

CO-AUTHORS

Stephen Hight, Georgia State University

<https://robinson.gsu.edu/profile/stephen-kyle-hight/>

Xinyuan (Roy) Zhao, Sun Yat-Sen University

<http://bus.sysu.edu.cn/teacher/ZhaoXinyuan>

Khaldoon Nusair, Sultan Qaboos University

<https://www.squ.edu.om/economics/Departments/Marketing/Faculty-and-Staff>

Agnes L. DeFranco, University of Houston

<https://uh.edu/hilton-college/Contact-Us/Faculty-Directory/Agnes-L.-DeFranco/>

REFERENCES

Hua, N., Hight, S., Wei, W., Ozturk, A.B., Zhao, X.(R.), Nusair, K. and DeFranco, A. (2019), The power of e-commerce: Does e-commerce enhance the impact of loyalty programs on hotel operating performance?, *International Journal of Contemporary Hospitality Management*, Vol. 31 No. 4, pp. 1906-1923. Available at: <https://doi.org/10.1108/IJCHM-02-2018-0168>

PERSONAL RESPONSE

How important is it to consider the changing nature of the hotel market, as well as developments in IT, when interpreting the results of this study?

“ Loyalty programs have been proven effective and efficient in attracting and retaining repeat business, which is considered critical to hotel financial performance. This study not only echoes and confirms the positive financial impact of expenditures on loyalty programs but also shows that IT investments can improve financial impacts of loyalty programs despite the evolving nature of hotel businesses and quick advancements of IT over time. ”



Dr. Nan Hua



Dr. Hua is a professor in hospitality financial management and serves as the chair for the Department of Hospitality Services at Rosen College. His research focuses on Performance Analysis, Information Technology Impacts, and Intangible Assets analysis.

E: Nan.Hua@ucf.edu T: +1 407.903.8095

W: <https://hospitality.ucf.edu/person/nan-hua/>

Dr. Wei Wei



Dr. Wei joined the Rosen College as an Assistant Professor in August 2014. Dr. Wei received her Ph.D. degree and Master's degree in Hospitality and Tourism Management from Purdue University, U.S.A. She also received her Bachelor of Science degree in Tourism Management from Northwest University, China.

E: Wei.Wei@ucf.edu T: +1 407.903.8230

W: <https://hospitality.ucf.edu/person/wei-wei/>

Dr. Ahmet Ozturk



Dr. Ozturk joined the Rosen College of Hospitality Management as an Assistant Professor in August 2011. He holds a Ph.D. in Hospitality Administration with Hospitality Information Systems concentration from Oklahoma State University, Stillwater Oklahoma.

E: Ahmet.Ozturk@ucf.edu

T: +1 407.903.8215

W: <https://hospitality.ucf.edu/person/ahmet-ozturk/>