Will COVID-19 be the trigger point for developing visitor attraction revenue management?

Natalie Claire Haynes and David Egan

Natalie Claire Haynes and David Egan are both based at the Sheffield Business School, Sheffield Hallam University, Sheffield, UK.

Abstract

Purpose – *The purpose of the paper is to explore how the effects of the COVID-19 pandemic will influence the development of revenue management practice in the visitor attractions sector.*

Design/methodology/approach – *This viewpoint paper builds on the argument that tracking previous patterns of behaviour and trends can be used to predict future actions and developments.*

Findings – *The paper identifies how historically the development of revenue management practice has been driven by major external trigger points often linked to sudden increases in competitive pressures, such as the deregulation of the airline industry, and expands on this to argue that the pandemic is one such trigger point that has fundamentally changed the approach to revenue management through a refocusing on key principles to manage demand and that this could potentially accelerate its development within the visitor attraction sector.*

Originality/value – *Pre-COVID, the practice of revenue management in the visitor attraction sector was underdeveloped, and the opportunities to develop revenue management had not been discussed in the academic literature. This paper suggests that the challenges of the pandemic that forced visitor attractions to focus on visitor demand management can now begin to be extended to incorporate the management of revenue and will consequently be of value for academics and practitioners.*

Keywords *Visitor attraction management, Revenue management, COVID-19, Inventory management, Futurology, Demand management*

Paper type *Viewpoint*

Introduction

As the COVID-19 pandemic has persisted, driven by the identification of new variants and subsequent waves of infection, the visitor attraction sector has just entered the uncharted territory of trying to maximise revenues whilst managing social distancing guidelines and government-imposed restrictions. COVID-19 brought with it extreme operational challenges and financial pressures for visitor attractions. In the United Kingdom (UK) alone, attraction visits fell by 65% from 340 million in 2019 to 120 million (Mintel, 2021). This was made up of a 50% drop in domestic visitors and a 90% drop in overseas visitors, and it is predicted that visitor attraction figures will not recover to pre-pandemic levels until 2024 (Mintel, 2021). These drops in visitor numbers translated into a 55% reduction in revenues for 2020 (Visit England, 2021).

Received 8 February 2022
Revised 20 June 2022
3 August 2022
Accepted 18 October 2022

During this time, when visitor attractions were able to open, there was a need to operate at limited capacity to meet social distancing regulations coupled with reduced and increasingly uncertain demand due to economic downturns, fluctuating infection levels and constant changes in restrictions. Visitor attraction managers suddenly had to consider pre-booking, cancellation policies, capacity controls and demand management. They were forced to find new ways to sell the right product and service, to the right customer, at the right time and at the right price. However, the focus was on managing a "safe" number of visitors in the attraction and prioritising the revenue needed to survive. Essentially, either knowingly or unknowingly, they were beginning to embrace the central tenets of revenue management to stay competitive, but the focus was on the action of tactical visitor number management rather than revenue management per say. This paper will explore how and why the pandemic could prove to be the stimulus needed for visitor attraction managers to start to follow the journeys that airlines and hotels have taken over the last half century to permanently embed revenue management to build a long-term revenue advantage.

It is widely accepted in the literature exploring the evolution of revenue management in service sectors that the practice began in the airline industry and then spread to hotels and then to a lesser extent to other industries, such as restaurants. Cross *et al.* (2011, p. 9) confirm that after the initial introduction of revenue management in the airline sector, entitled yield management at the time, it then spread "relentlessly to other industries where competitive pressures and the need for profitable growth spurred innovative thinking." In the airline industry, the need for revenue management was triggered by the increased competition faced by legacy airlines post-deregulation in the late 1970s (Cross *et al.*, 2011; Vinod, 2016). For hotels, the competitive trigger point came in the 1980s due to increased competition caused by over-development (Josephi *et al.*, 2016) and the increase in capacity being quickly followed by a recession (Vinod, 2004). It is clear from this that the development of revenue management was stimulated by the basic economic trigger point where supply outstripped demand in key markets. These competitive pressures meant early adopters of revenue management, such as American Airlines and Marriott Hotels, recognised its benefits of managing the combination of time-varied demand, fixed capacity, segmentation, perishable inventory and high fixed costs (Bobb and Veral, 2008) to grow profitability and market share. In essence, they became sensitised to the need for careful management of temporal and spatial dimensions.

The nature of futurology suggests that identifying and examining past trends can help us make predictions of what might happen next in a given context (Sardar, 2010). From this viewpoint, the COVID-19 pandemic can easily be seen as the latest in a line of external trigger points that will stimulate the rate of revenue management adoption in new sectors. The historic development of revenue management was not accidently but driven by significant external issues that drove competitive pinch points (Yeoman and McMahon-Beattie, 2017). In this case, we argue that it may form the catalyst for a wider scale adoption of revenue management in the visitor attraction industry. However, in the case of this pandemic, the competitive trigger point has resulted from something more complicated than just an imbalance of supply and demand as was the case for airlines and hotels and instead has been related to frustrated demand and supply caused by lockdowns and social-distancing legislation. Nevertheless, the pandemic can be viewed as causing a similar fundamental change in market conditions to the de-regulation of the airline sector and the building boom in hotels and result in the next stage of the evolution of revenue management into the visitor attraction sector.

The COVID-19 trigger point

Prior to the start of the pandemic, the use of revenue management in the visitor attraction sector was not well-established (Ko and Park, 2019). Most of the discussion focused on the management of excess demand in sensitive ecological or heritage sites (Garrod *et al.*, 2002). This was despite the recognition that visitor attractions shared key characteristics with hotels and airlines, where revenue management was proven to be effective, such as relatively fixed capacity, perishability, unstable demand, segmentable markets and low marginal costs (Yeoman *et al.*, 2001). Revenue management was often limited in terms of scope and sophistication possibly due to the lack of access to technologically driven revenue management systems, limited use of price discrimination and challenges with the collection of consistent and reliable visitor data, particularly in comparison to the more established revenue systems and processes being used in the hotel industry (Leask *et al.*, 2013).

However, as already highlighted, COVID-19 has forced visitor attraction managers to begin to consider the broader management of temporal and spatial factors more carefully due to the need to maximise revenue because of social distancing and dynamic restrictions. Managing factors of space and time are fundamental principles to revenue management and were a key focus of the early adopters of revenue management so arguably should stimulate its development. Within revenue management, the relationship between space and time is fundamental to selling the right inventory (e.g. a hotel room or a seat on a theme park ride) at the right time (e.g. day of week or time of the day) to the right customer at the right price. However, we argue that the pandemic is a more complex trigger point than seen before because its impacts have been so profound. They will still trigger revenue management development but in slightly different ways to before. The lockdowns that have caused businesses to close, the social distancing regulations that have severely limited capacity as well as the lack of historic data to aid accurate forecasting have moved this trigger point beyond just the issue of supply outstripping demand as seen before in the 1970 and 1980s. COVID-19 has resulted in a fundamental shift in the practice of revenue management but one that we believe will favour its development in visitor attractions.

The shift has been to one of adaptive revenue management (Vinod, 2021). COVID-19 has meant that the historic demand data we have are no longer relevant and that complex revenue management systems that rely on historical data are not working well to forecast demand due to greater levels of uncertainty (Yeoman, 2021). We argue that if this drives a shift away from the need for complex revenue management systems driven by algorithms and historical data, this will provide a unique opportunity for visitor attractions to embrace revenue management practices where we know there is a lack of data management and revenue management systems in place. In a sense, we are seeing a simplification of revenue management practice that will benefit new adopters. The fundamental basis of adaptive revenue management will be a move to continuous demand management with more short-term reactions to demand indicators (Vinod, 2021). This again will favour visitor attractions as many of the key demand indicators that they need to react to are short term such as weather conditions. On reflection there seems to be a move back to first principles of predicting short-term demand factors, and through this, simplification makes revenue management less resource and skill intensive for new adopters.

In addition, the other benefit of expanding these revenue management practices now is that customer acceptance is high, partly due to an increased level of perceived fairness of these approaches and also because a proportion of customers now have less tolerance to crowds and prefer more carefully managed spaces. Revenue management is more likely to be fully embedded where customers have become familiar with the practices and policies in the sector (Kimes and Wirtz, 2003), such as the acceptance of overbooking in hotels and denied boarding for airlines and where it enhances customer experience. The very nature of pre-booking for visitor attractions has started this process of customer acceptance of inventory management in the sector, and this should be exploited to encompass other forms of revenue management such as dynamic pricing, which customers accept elsewhere. Revenue management is more likely to become established now than at any other time as customers have had over two years of being educated into the practice of pre-booking time slots, length of stay restrictions and controlled use of space. This is the prime time for venues to maintain this education of customers by continuing these practices so that revenue management becomes as acceptable for visitor attractions as it is for in hotels and airlines, especially if the more careful management of space and time improves the visitor experience and offers better customer value as we have demonstrated.

Future-proofing visitor attraction revenue management

Attractions need to start to move from simple visitor number management to a more sophisticated management of temporal and spatial factors. Corrective actions to the dimensions of space and time must respond to more subtle changes in demand moving in line with the continuous demand management that underpins the new adaptive approach to revenue management. Vinod (2021, p. 12) describes this as "using all the available business levers to take corrective action". In the past, both managers and academics have considered the dimensions in their broadest form, for example through examining the impact of seasonality on demand for visitor attractions

(Goulding, 2012; Connell *et al.*, 2015). Spatial dimensions have often also been examined in the literature, typically through investigation into the threshold where visitor numbers in an attraction begin to have a negative impact on the experience through longer queues and congestion or where over-crowding can cause damage to ecological or heritage attractions (Garrod *et al.*, 2002; Milman, 2019). In the short term, the visitor attraction sector has reacted by introducing broad revenue management functions, but the argument is that these short-term measures can now be refined. Some examples are now offered.

During the pandemic, visitor attractions have often segmented their opening times into two-hour entrance slots, but they have not taken this a step further to gain the advantages of dynamic pricing, which is well-established in the hotel and airlines sectors. We have observed that attractions have often charged the same entry prices for all timed slots. They have not flexed the pricing for bookable slots according to forecasted demand for smaller blocks of time than perhaps they are used to doing in terms of seasons or school holidays. Imagine the extra demand that could be captured by attractions if later bookable slots were reduced in price to capture local customers. This recognition of capturing subtle short-term changes in demand through flexing price is a key example of both continuous demand management and adaptive revenue management that is within the reach of visitor attraction managers. With more data being collected through pre-booking and online systems, visitor attractions could in the future have the knowledge required to offer these reduced last-minute rates and could perhaps even explore over-booking policies and wait lists. In addition, spatial sensitivity could also be exploited further through more use of bundling to carefully manage the customer use of space, for example special food and beverage activities such as afternoon tea could be linked to early afternoon entry to encourage the take-up of later booking slots and reduce pressure on lunch demand for on-site restaurants and cafes. Here increased sensitivity to temporal and spatial dimensions encourages the introduction of more adaptive pricing and inventory strategies that link together to maximise the revenue achieved from the available demand, taking the use of revenue management to the next level. Visitor attractions would then be closer to delivering the right service at the right time at the right price to the right customer.

Conclusion

To conclude, COVID-19 has created the conditions and a fundamental shift in revenue management practice. But now visitor attraction managers must fulfil the opportunities. A trigger point has sparked the introduction of revenue management practices needed to cope with a crisis, but they should now be refined and exploited for the longer-term profitability of visitor attractions. The first steps in the journey have been taken, but reaching the destination is still a way off. If attractions continue to follow more carefully thought-through inventory management, pricing and pre-booking, supported by continuous demand management, they will begin to build the ability to flex pricing and inventory policies to maximise demand and increase revenue generation just as hotels and airlines have been doing for decades. We feel that those visitor attractions who fully embrace the revenue management function are more likely to be profitable in a post-COVID world.

References

Bobb, L.M. and Veral, E. (2008), "Open issues and future directions in revenue management", *Journal of Revenue and Pricing Management*, Vol. 7 No. 3, pp. 291-301.

Connell, J., Page, S.J. and Meyer, D. (2015), "Visitor attractions and events: responding to seasonality", *Tourism Management*, Vol. 46, pp. 283-298.

Cross, R.G., Higbie, J.A. and Cross, Z.N. (2011), "Milestones in the application of analytical pricing and revenue management", *Journal of Revenue and Pricing Management*, Vol. 10 No. 1, pp. 8-18.

Garrod, B., Fyall, A. and Leask, A. (2002), "Scottish visitor attractions: managing visitor impacts", *Tourism Management*, Vol. 23 No. 3, pp. 265-279.

Goulding, P. (2012), “Seasonality: the perennial challenge for visitor attractions”, in Fyall, A., Garrod, B. and Leask, A. (Eds), *Managing Visitor Attractions: New Directions*, Butterworth-Heinemann, Oxford, pp. 159-177.

Josephi, S.H., Stierand, M.B. and Van Mourik, A. (2016), “Hotel revenue management: then, now and tomorrow”, *Journal of Revenue and Pricing Management*, Vol. 15 No. 3, pp. 252-257.

Kimes, S.E. and Wirtz, J. (2003), “Has revenue management become acceptable? Findings from an international study on the perceived fairness of rate fences”, *Journal of Service Research*, Vol. 6 No. 2, pp. 125-135.

Ko, Y.D. and Park, K. (2019), “Theme Park revenue management with a dual admission policy”, *Asia Pacific Journal of Tourism Research*, Vol. 24 No. 9, pp. 865-881.

Leask, A., Fyall, A. and Garrod, B. (2013), “Managing revenue in Scottish visitor attractions”, *Current Issues in Tourism*, Vol. 16 No. 3, pp. 240-265.

Milman, A. (2019), “Visitor management in highly-visited attractions: lessons that practitioners can learn from the US theme park industry and the national parks”, in Erschbamer, G., Pechlaner, H. and Innerhofer, E. (Eds), *Overtourism – Tourism Management and Solutions*, Routledge, New York, pp. 104-124.

Mintel (2021), *Visitor Attractions UK, 2021*, Mintel Group, London.

Sardar, Z. (2010), “The Namesake: futures; futures studies; futurology; futuristic; foresight—what’s in a name?”, *Futures*, Vol. 42 No. 3, pp. 177-184.

Vinod, B. (2004), “Unlocking the value of revenue management in the hotel industry”, *Journal of Revenue and Pricing Management*, Vol. 3 No. 2, pp. 178-190.

Vinod, B. (2016), “Evolution of yield management in travel”, *Journal of Revenue and Pricing Management*, Vol. 15 No. 3, pp. 203-211.

Vinod, B. (2021), “An approach to adaptive robust revenue management with continuous demand management in a COVID-19 era”, *Journal of Revenue and Pricing Management*, Vol. 20 No. 1, pp. 10-14.

Visit England (2021), *Annual Visitor Attractions Survey 2020*, Visit England, London.

Yeoman, I. (2021), “Q. Can we manage demand in a COVID-19 world? A. I don’t know”, *Journal of Revenue and Pricing Management*, Vol. 20 No. 1, pp. 1-2.

Yeoman, I.S. and McMahon-Beattie, U. (2017), “The turning points of revenue management: a brief history of future evolution”, *Journal of Tourism Futures*, Vol. 3 No. 1, pp. 66-72.

Yeoman, I., McMahon-Beattie, U. and Sutherland, R. (2001), “Leisure revenue management”, *Journal of Retail and Leisure Property*, Vol. 1 No. 4, pp. 306-317.

Corresponding author

Natalie Claire Haynes can be contacted at: n.haynes@shu.ac.uk