

# The evolution of competitor data collection in the hotel industry and its application to revenue management and pricing

HAYNES, Natalie <a href="http://orcid.org/0000-0002-8717-0488">https://shura.shu.ac.uk/11591/</a>

This document is the Accepted Version [AM]

#### Citation:

HAYNES, Natalie (2016). The evolution of competitor data collection in the hotel industry and its application to revenue management and pricing. Journal of Revenue and Pricing Management, 15 (3-4), 258-263. [Article]

## **Copyright and re-use policy**

See <a href="http://shura.shu.ac.uk/information.html">http://shura.shu.ac.uk/information.html</a>

# The Evolution of Competitor Data Collection in the Hotel Industry and its Application to Revenue Management and Pricing.

Natalie Haynes BSc, MSc, FHEA, MIH

Lecturer in Hospitality at Sheffield Business School, Sheffield Hallam University

Sheffield Hallam University City Campus Howard Street Sheffield United Kingdom S1 1WB

Direct Line: 0114 2253101 Mobile: 07450 204443

Email: n.haynes@shu.ac.uk

Natalie Haynes lectures in the fields of revenue management, marketing and hotel management at Sheffield Hallam University, within the Department of Service Sector Management. Her current research focus is on the use of data and information in price decision-making within the hotel industry, with a particular interest in the use of competitor data. Drawing on her own hotel sales career with several major global brands, her teaching emphasises the integration of sales, revenue and operational functions.

The Evolution of Competitor Data Collection in the Hotel Industry and its Application to Revenue Management and Pricing.

## Abstract (100 words)

This paper explores the move towards the collection and processing of hotel competitor set data since the late 1970s. It identifies a shift from using internal metrics to measure the revenue generating capabilities of a hotel, such as performance against budget, to the use of large amounts of detailed competitor set data processed for hotels by third parties. It analyses the impacts of these changes on the way pricing and revenue decisions are made and suggests the modern manager may have become over focussed on competitor data, potentially diverting the focus from hospitality specific success factors, such as customer service.

Keywords: competitor data, hotels, revenue management, price decision-making

#### INTRODUCTION

The quote, "In God we trust, all others must bring data," most often attributed to the famous, mid-twentieth century statistician, W.E. Deming, still resonates today and no more so than in the hotel industry. Over the last three decades, how competitor data is collected and analysed to support revenue management and pricing has changed drastically. However, the vast quantity and complexity of data seen today has not always been available and this paper utilises in-depth interviews, conducted in 2014 and 2015 with hotel managers who witnessed the changing nature of competitor data collection, to examine the factors influencing these changes. It focuses on how competitor data collection has moved from being a manual process, with a daily "ring round" identifying local hotels' daily occupancy rates, to the situation seen today where hotels invest significant amounts of time and money in employing independent third party companies, such as Smith Travel Research (STR), to collect and collate competitor set data on their behalf. Crucially it examines the impact of these develops on revenue management and price decision-making in hotels.

#### THE FIRST STEPS TOWARDS REVENUE AND PRICING DATA COLLECTION

Yield management, now known as revenue management, originated in the airline industry after its deregulation in the 1970s, but didn't reach the hotel industry until the early 1980s (Donaghy, McMahon and McDowell, 1995). However, it wasn't until the latter part of that decade that it was recognised as an established practice amongst hoteliers. Sheryl Kimes in her introduction to the subject commented that it was at this point in 1989 when yield management had become "part of the standard operating procedure for many hotels" (Kimes, 1989, p.14). Despite its wide use, early hotel yield management, was relatively basic in its focus and scope, with metrics limited to occupancy, average room rate and yield, which was a division of realized revenue and potential revenue if all rooms were sold at published rates (Orkin, 1988). Orkin (1988) certainly makes no mention of the utilisation of competitor data in setting pricing in his descriptions of yield management.

During these early stages of the implementation of yield management managers only had a superficial interest in what their competitors were doing and it was certainly not a strategic part of price decision-making. Williams (1977) in his research paper on decision theory in hotel reservation polices emphasises the lack of data. The managers interviewed commented that whilst they may have attempted to track competitor occupancy levels they had little interest in incorporating this information into their room price decisions. However this appears less about availability of data and more down to a lack of focus on room sales. They suggested this was a combination of two factors. Firstly the market was buoyant in the early to mid-1980s and competitive pressures were low. As one manager commented "rooms were rooms," and "they were not hard to sell". Secondly, as another manager observed, it was the era of the "traditional GM", where they had come from a food and beverage background and had little focus on room sales. Another agreed that "hotels were run by hoteliers back then". This focus on traditional hospitality and the guest-host relationship, that Hemmington (2007) argues is key to hospitality, meant managers concentrated more heavily on internal customer service data, especially when combined

with low competitive pressures. When competitor occupancy data was collected it occurred manually by way of the daily ring round, even counting cars in car parks (Higley, 2005a) or through informal communications between hotel managers at social events. However, none of the managers interviewed remembered feeling they were missing any vital competitor data in the early days of yield management and their primary focus appeared to be on internal company data and measuring performance against budget. Unit managers within sister properties were happy to exchange detailed information amongst themselves and thus felt little need for more external data to be collected from other competitors. One manager, who worked for a major UK brand felt because the hotels were owned and operated by the same company "the atmosphere was more trusting" and they would share information on rates, occupancy, sleeper diner ratios as well as performance against budget.

Even though during the early 1980s the hotel industry appeared not be searching for more information, third party hotel consultants were already beginning to see how they could capitalise on the introduction of yield management but the early focus was still not on competitor set data. One such example is Laventhol and Horwath (L&H). The Cornell Hotel and Restaurant Administration Quarterly shows an advertorial for the company promoting the addition of yield management support to their Owner Support Services Package (Orkin, 1988). Where industry data was collected it was limited to tracking broad trends due to high costs of data collection and storage. John Lesure, developed a Research, Development and Education Department at L&H, but Smith (2009) describes that there was "tremendous resistance to some of our work" due to these costs. However, even when Randall Smith left L&H to set up STR in 1985 the company only concentrated on developing reports that showed industry wide trends (Smith, 2010). Managers interviewed for this paper recollected these broad trend reports, with one describing a "league table hotels chains," that merely ranked them against each other based on "ill-defined metrics", although the report described here was not generated by STR.

#### THE EMERGING NEED FOR COMPETITOR SET DATA

At some point in the late 1980s and early 1990s there was a step change in hotel industry research, with the industry applying pressure to third party companies, especially STR, to provide competitor data. Randall Smith from STR (2009) argues it was a combination of factors that drove this change. Firstly, improvements in information technology reduced data processing costs but secondly, and probably most importantly, the competitive landscape of the hotel industry changed dramatically. There was a building boom and with these massive increases in supply came increased pressure on hotel managers to concentrate on room rates and competitor movements. The American Hotel and Lodging Association (2015) calculated a 48 per cent increase in the number of hotel rooms in the United States alone between 1980 and 1990 and by the late 1980s there was a situation of oversupply (Butler Jr, Benudiz and Rushmore, 1994). The managers interviewed concur that from the 1980s onwards increased levels of competition meant more awareness of what their competitors were doing was needed. One manager stated simply that "the sales of rooms got harder as the 1980s went on". At first the industry pushed for basic market share reports but it soon moved onto the need for more localised competitor set data. Of course

the trend towards the separation of owner and operator with the wider introduction of management contracts and sale-and leaseback deals in the early to mid-1990s (Whitford, 1998; Whittaker, 2008) also led to same brand hotels being owned by different parties. As a result trust levels between sister hotels and clusters were broken down and internally data sharing became rarer especially on commercially sensitive data such as performance against budget as hotels within the same brand became virtual competitors (Deroos, 2010). A situation arose where individual hotels could not meet the level of data originally shared within their brand and so began the move to relying on third party data suppliers. Higley (2005a) commented that Holiday Inn tried to be sophisticated in terms of their data collection but ultimately could not match the output of STR.

In 1987 STR launched the STAR program which began comparing "a cross section of competitors that fell within a fairly broad range of groups" (Smith and Zheng, 2011, p.371). However for the industry this was not enough as competitive pressures increased, especially for Westin who were the first to approach STR with the idea of creating specific competitor sets in 1989. Smith and Zheng (2011) confirm in the late 1980s the industry was desperate for market share analysis due to the building boom. However, STR, even though they are now a major global supplier of competitor set data, were initially cautious about taking up the challenge from Westin. They were concerned managers would not put together realistic competitor sets but rather ones that simply made the property look good. Up until this point STR had total control over the collection and processing of data and there was a big debate over whether they or hotel unit managers should select the competitor set. Initially they asked managers to gain brand approval of competitor sets, but have since then left it to the discretion of unit level managers (Smith and Zheng, 2011).

Today the STAR report based on specific competitor data comparing one hotel against five or six of its nearest competitors is described by Smith and Zheng (2011, p.371) as "ubiquitous". The dominance of STR and the STAR report has come about through a series of joint ventures that has led to the consolidation of the market that supplies hotel competitor data. This is appears to be an independent trend, operating outside of hotel industry developments but led to a final major step change were managers no long compare and look at competitor data and industry reports from a variety of sources but tend to rely solely on data supplied STR, especially if they are a brand (Office of Fair Trading, 2008). In 1998 STR made an agreement with PriceWaterhouseCooper's to collect and report on data outside North America (Malley, 1998) and in 2008 there was a further joint venture between STR, HotelBenchmark, the hotel benchmarking division of Deloitte and Touche LLP and The Bench Limited (Office of Fair Trading, 2008). However the success of the STAR reports has also relied heavily on the industry supplying the data for STR to process into summary reports. Trust has featured heavily in this and the use of aggregated data, meaning individually properties cannot be identified in a competitor set is the major factor for this. Smith (2010) himself highlights getting industry buy-in was crucial to the success of competitor data sharing in the hotel industry. He admits that samples in the late 1970s were often skewed by low response rates and that the best data was from areas where L&H had an office as this increased exposure of their work and expanded participation.

#### IMPACTS ON REVENUE AND PRICE DECISION-MAKING

Whilst it is useful to track historic changes in the collection and processing of competitor data collection, this analysis would not be complete without assessing the impact of these changes on the way modern hotel managers at unit level make revenue and price decisions. What the preceding story tells us is that managers today focus predominantly on measuring their performance based against what their competitors are doing and they rely on STR as the primary source of this information in the form of complex daily, weekly and monthly STAR reports. There has been a clear shift from a primary focus on internal metrics, such as performance against budget, to an external focus on performance being measured against the competitor set. However, the questions are twofold. Firstly, are the high levels of competitor data now contributing to the increases in competitive pressures and secondly, what are the practical implications for hotel managers of dealing with large amounts of competitor data with a predominately external focus?

In response to the first question it appears that the managers interviewed view the focus on competitor data as leading price decision-making into dangerous territory where possibly the complexities are of the competitive market are forgotten and by making decisions that react to competitor moves rather than internal competencies can increase competition, particularly the risk of price wars occurring (Cross, Higbie and Cross, 2011). The managers interviewed certainly support this view. They argue targets were set differently, against budget rather competitor sets, and therefore prices were made in confidence based on internal performance rather than on competitors. One manager reported that nowadays "people are scared to make decisions on rate". They commented that today there is such massive investment in hotels and pressure to make a return for investors that managers do not want to get it wrong. They are almost in a state of "panic" when they look at competitor data and regional trend data that they are not able to step back and say "does this data actually make sense". One manager commented on the market reports available that a hotel manager may panic if they see the rates in another market flying and that "this breeds unease" and a loss of focus on the business's own capabilities. One commented of the modern general manager that it is no longer "their company, their strategy". The focus became all about hitting targets rather than delivering traditional hospitality. Traditional hospitality looks at nurturing guests in the long-term (Hemmington, 2007), whereas the focus on competitor based targets may have led to more short-term and tactical price decisions being made. Alongside this is the development of revenue systems which allows managers to make multiple price changes per day at the touch of the button. Perhaps this has also encouraged only a superficial focus on large amounts of data leading to more reactive pricing. Another manager commented that there was so much focus on data that they took the eye off what was actually important in driving revenue and that was delivering customer service. Certainly the competitive market is not just related to firms but also customers (Kim and Canina, 2011). So by looking purely at competitor movements through data, such as the STAR report, it might be possible to argue that managers are missing out on the richness of other data sources, which could lead to customer-focused, strategic pricing decisions.

So what emerges from this and begins to answer the second question is that managers today must combine the analysis of STR data with other types of data. The danger is that the modern hotel manager has been conditioned to rely on competitor set data. Higley (2005b) commented that many younger hotel managers may not remember the challenges of the pre-STR days when competitor data was either hard to find or not the focus and therefore other data types, such as customer feedback, had to be used when making revenue and pricing decisions. One manager commented that now price decisions are so time responsive that having other data such as a local events calendar becomes even more important in making a sensible price decision. Haynes and Egan (2014) research did raise concerns that managers only looked at data linked to their performance criteria, which is often the STAR report. Consolidation of the third party data market has also potentially reduced the range of competitor data set available for managers to compare.

#### **CONCLUSIONS**

What appears clear is that modern hotel managers perhaps ought not to focus entirely on externally generated competitor data. However, perhaps there is some positive evidence that the industry is beginning to come full-circle and return to a focus on customer service data, with companies, such as Revinate (2015) starting to supply the industry with collated data on customer feedback from multiple social media platforms. The hotel industry appears to be focusing on new data sets to get a better balance between external competitor data and internal customer service data that supports the delivering of traditional hospitality based on a successful host-guest relationship (Hemmington, 2007). In essence competitor set data poses the question but does not always deliver the answer. Managers responsible for making pricing and revenue decisions should always step back and consider whether the choices they make are right for their unit, based on its own capabilities, customers and service levels. As discussed in recent research by Wilson-Wünsch et al (2015) managers should develop the ability to turn facts from competitor data, into higher levels of more development knowledge in order to set the right price and as Kimes (2011) predicted this requires analytical approaches to revenue management. What is perhaps fascinating and worthy of further investigation is that the industry's reaction has not necessarily been to build analytical skills, but to collect yet more data sets. It appears that Big Data continues to rule.

Words – 2683

#### **REFERENCES**

American Hotel and Lodging Association. (2014). History of Lodging. http://www.ahla.com/content.aspx?id=4072, accessed 30th September 2014

Butler, J. R., Benudiz, P. P., and Rushmore, S. (1994). Hotel lending in the 1990s: amateurs beware. *The Cornell Hotel and Restaurant Administration Quarterly*, 35(6), 39-46.

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*, 10(1), 8-18.

Deroos, J.A. (2010). Hotel Management Contracts – Past and Present. *Cornell Hospitality Quarterly*, 51(1), 68-80.

Donaghy, K., McMahon, U., and McDowell, D. (1995). Yield management: an overview. *International Journal of Hospitality Management*, 14(2), 139-150.

Haynes, N. and Egan, D. (2014). The future of Big Data and its impact on unit level operations. Paper presented at EuroCHRIE Dubai, UAE, October 2014. Unpublished.

Hemmington, N. (2007). From service to experience: Understanding and defining the hospitality business. *The Service Industries Journal*, 27(6), 747-755.

Higley, J. (2005a). Twenty years and counting: STR fills void for industry. *Hotel and Motel Management*, 260 (16), 75

Higley, J. (2005b). Rich data collection gives industry key talking points. *Hotel and Motel Management*, 220(16), 91.

Kim, J. and Canina, L. (2011). Competitive Sets for Lodging Properties. *Cornell Hospitality Quarterly*, 52(1), 20-34.

Kimes, S. E. (1989). The Basics of Yield Management. *The Cornell Hotel and Restaurant Administration Quarterly*, 30(6), 14-19.

Kimes, S.E. (2011). The future of hotel revenue management. *Journal of Revenue and Pricing Management*, 10(1), 62-72.

Malley, M. (1998). STR dissects data differently. Hotel and Motel Management, 213(3), 3

Office of Fair Trading. (2008). Anticipated joint venture between Deloitte and Touche LLP, Smith Travel Research, Inc. and The Bench Ltd. https://assets.digital.cabinet-office.gov.uk/media/555de391e5274a70840000ac/Deloitte.pdf, accessed 21st October 2015.

Orkin, E. B. (1988). Boosting your bottom line with yield management. *The Cornell Hotel and Restaurant Administration Quarterly*, 28(4), 52.

Revinate. (2015). Informed decision making. https://www.revinate.com/products/reputation, accessed 13<sup>th</sup> November 2015

Smith, R. (2009). A personal tribute to Mr. John D. Lesure – my teacher. http://www.hotelnewsnow.com/article/PrintVersion/1785, accessed 21st October 2015

Smith, R.A. (2010). Reliable Hotel Industry Data: Twenty-Five Years in the Making. *Cornell Hospitality Quarterly*, 51(4), 454-456.

Smith, R.A. and Zheng, L. (2011). A Look at Comp Sets: A Historical Perspective That Shapes Today's Way of Thinking. *Cornell Hospitality Quarterly*, 52(4), 371-373.

Whitford, M. (1998). Sale/lease-back agreements gain popularity. *Hotel and Motel Management*, 72, 72-74.

Whittaker, C. (2008). Hotel operator motives in the UK sale and leaseback/management-back transactions. *International Journal of Hospitality Management*, 27(4), 641-648.

Williams, F.E. (1977). Decision theory and the innkeeper: An approach for setting hotel reservation policy. *Interfaces*, 7(4), 18-30.

Wilson-Wünsch, B., Beausaert, S., Tempelaar, D. and Gijselaers, W. (2015). The Making of Hospitality Managers: The Role of Knowledge in the Development of Expertise. *Journal of Human Resources in Hospitality and Tourism*, 14(2), 153-170.