Big data

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Big data is defined as extremely large datasets that may be analysed computationally to reveal patterns, trends and associations, especially relating to human behaviours and interactions. (McAfee and Brynjolfsson 2012). The decisions taken by means of Big data are better, more precise, focused and quicker. Big data enables managers to decide on the basis of the evidence rather than intuition. Big data like ‘revenue manager’ is changing the current business practice. Both topics intertwine with, and are natural to, each other. Vinod (2013) was right when he stated thus:

The advent of Big Data will have a profound impact on gaining consumer insights, improving process efficiencies and enhancing consumer experience. This article describes the role of Big Data in an organization, its impact on pricing and revenue management, and how it can be leveraged for competitive advantage by travel suppliers, online travel agencies and travel agencies

As revenue management is now based upon data-intensive systems and distribution channels, Big data is an asset to revenue management due to the variety, size and decision variables for revenue management decisions. It is Big Data that allows making forecasts for legs or length of stay, arrival and departures, connectivity and price sensitivity, thus marrying demand and supply.

Big data is all about petabytes, exabytes, or zettabytes. One petabyte is equivalent to 20 million traditional filing cabinets of text. Big data is about velocity or the relentless rapidity of data creation. Many sources of Big Data provide a diverse richness that far surpasses traditional data from the past. A major difference between contemporary Big Data and traditional data is the shift from structured transactional data to unstructured behavioural data.

Dynamic pricing enables an organization to implement a flexible pricing strategy based on changing consumer

demand (Erevelles et al. 2016). As a Sunderland AFC fan, business managers for football team can predict price and use prediction-based pricing systems involving a multitude of variables such as the time of day, weather, opposition, packages, day of the week, and incorporate social media chatter, such as week. Thus, the use of Big Data allows the business manager to capture the willingness of fans to pay more for a special game, i.e. Sunderland v Newcastle United. Big Data means that revenue management becomes even smarter with automatic techniques focused on the efficient optimization of occupancy, networks and prices based upon prediction. The methods and algorithms for predictive analytics and revenue management such as regression analysis, machine learning and neural networks have been in existence for some time. However, Big Data allows for the integration of these techniques. Thus, Big data is one of the future avenues of Revenue Management, but in a big way.

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