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ScienceDirect
International Journal of Information Management 28 (2008) 168–180
International Journal of Information Management
www.elsevier.com/locate/ijinfomgt

Performance measures of net-enabled hypercompetitive industries: The case of tourism

Eleni Michopoulou[a,*], Dimitrios Buhalis[b]

[a]School of Management, University of Surrey, Guildford, Surrey GU2 7XH, UK
[b]Bournemouth University, Talbot Campus, Fern Barrow, Poole, Dorset, BH12 5BB, UK

Abstract

This paper investigates the theory and practice of e-metrics. It examines the tourism sector as one of the most successful sectors on-line and identifies best practice in the industry. Qualitative research with top e-Marketing executives demonstrates the usage and satisfaction levels from current e-metrics deployment, selection of e-metrics for return on investment (ROI) calculation as well as intention of new e-metrics implementation and future trends and developments. This paper concludes that tourism organizations gradually realise the value of e-measurement and are willing to implement e-metrics to enable them evaluate the effectiveness of their planning processes and assess their results against their short- and long-term objectives.

Keywords: Web analytics; e-Metrics; ROI; Tourism; Performance measurement

1. Introduction

As the entire business world is moving to on-line solutions and e-commerce there is a growing interest in web analytics and e-metrics (Aberdeen Group, 2002). e-Metrics represent a suite of instruments that powerfully transform data delivered by IT departments into intelligence providing a range of benefits for organizations (Crane, 2003). According to a 2007 Forrester research, companies tend to allocate greater percentage of their budgets on e-metrics every year, indicating users intention to maximize value from existing tools and move up the maturity continuum (Burns, 2006a).

e-Metrics deployment can optimize on-line performance and also indicate further investment opportunities providing a more precise estimation of a company's return on investment (ROI). Hence, ROI is better calculated and predicted whilst unprofitable elements of on-line business can be identified and addressed accordingly. The feedback and insights gained regarding on-line campaigns, enable organizations to compare and integrate on- and off-line marketing results, and make decisions upon the desirable marketing mix that maximizes revenue for the company (Ranganathan, Dhaliwal, & Teo, 2004). Finally, the refresh rate of on-line content can be determined, minimizing websites maintenance cost in terms of time and money.

e-Metrics also assist organizations around the world to fine-tune their traditional business models. e-Metrics can identify which channels and business partners generate traffic and profitability. Partners that add value to the distribution chain can be supported and sustained, while others can be managed or eliminated. In this sense, e-metrics support Business Process Reengineering (BPR) by enabling organizations to redesign their processes to be able to fit into the new customer-centric era and to achieve the required level of personalization and customization profitably. By doing so they are supporting them to gain and maintain competitive advantage and survive in the on-line realm (Phan, 2003). Additionally, e-metrics are also perceived as a useful forecasting tool. The organizational and technical infrastructure of the company can be modified and improved, as potential demands can be predicted in advance, ensuring scalability. By tracking on-line customer life cycle (CLC), organizations can turn

*Corresponding author. Tel.: +44 1483 686324; fax: +44 1483 683246.
E-mail addresses: Eleni.Michopoulou@surrey.ac.uk (E. Michopoulou), dbuhalis@bournemouth.ac.uk (D. Buhalis).

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doi:10.1016/j.ijinfomgt.2007.07.003

prospects into converted customers and forecast their lifetime value.

The tourism industry has long utilized electronic distribution systems to provide relevant information to the customer to facilitate a purchase decision, and is heavily affected by the development of electronic commerce; particularly in the way it distributes tourism products in the marketplace (O'Connor, 2000). Tourism organizations, including tour operators, hotels and airlines, are between the pioneers in Internet adoption and e-commerce activity (Buhalis, 2003).

This paper explores the e-metrics evolution and elaborates their deployment within the context of the tourism industry, as one of the fastest growing sectors on-line (Marcussen, 2005). It also aims to identify which e-metrics are used for ROI calculation, examine the level of satisfaction from current e-metrics practices as well as investigate future intentions regarding e-metrics deployment.

2. Theoretical background

2.1. The area of performance measurement

The utilisation of relevant metrics is considered key for accurate performance measurement (Inan, 2002). Measuring performance assists organizations to improve tactical and strategic decision making, as it demonstrates the effectiveness of planning and operational strategies and processes. Therefore, measuring performance enables organizations to evaluate results according to company's short-term objectives as well as the long-term strategic goals (Doyle & Wong, 1998).

Metrics are used for both individual and comparative performance measurement. Companies need to assess their own performance in order to assure that the results comply with both short-term objectives and long-term goals. This way the overall business strategy can be evaluated, validated or redesigned in case there is no alignment between results and objectives. Therefore, specific metrics are utilised in order to measure effectiveness of results in relation to the goals set initially. Comparative assessment utilises metrics that relate to industry benchmarks in order to indicate a company's relative position and competitiveness (Friedlein, 2003) within its respective industry.

Performance measurement today becomes more complicated because business processes and activities for e-commerce are dramatically different from the traditional brick- and-mortars due to the characteristic infrastructure of the Internet economy (Straub & Watson, 2001). Hence, performance measurement frameworks vary considerably among "brick and mortars", "net-enhanced" and "net-enabled" organisations (Straub, Hoffman, Weber, & Steinfield, 2002). Net-enabled businesses in particular, need to enhance the traditional performance measurement frameworks with additional metrics in order to capture and reflect the context of the on-line environment where business is conducted (Straub et al., 2002). The remaining question than becomes what specific constructs and metrics are suitable to explain and effectively measure performance in the net environment? (Straub & Watson, 2001).

There have been some attempts to measure on-line performance by applying frameworks from disciplines like Marketing and Management (Albrecht, Dean, & Hansen, 2005; Davidson, 1999; Hauser & Katz, 1998) and Management Information System (MIS) (DeLone & McLean, 2004; Instone, 1997; Levi & Conrad, 1996; Love, Irani, Standing, Lin, & Burn, 2005; Nielsen, 1993, 2005; Novak & Hoffman, 1997). Still, it is only recently that more comprehensive and holistic performance measurement frameworks, which specifically take into account and address on-line activities, have evolved.

One of the earlier frameworks to measure on-line performance was the DeLone and McLean model, which had a strong IS focus. This framework was revisited by the authors 12 years later in 2004 to update and enhance one of the constructs (net benefits) and also to add "service quality" as a critical parameter for performance measurement. Thus, the new framework had gained a marketing perspective and was also more tailored towards the e-business environment.

NEBIC theory also examines how net-enabled organisations add value to the customer (Wheeler, 2002). This theory assumes that emerging technologies, economic opportunities, and business innovation need to be coordinated and optimised to deliver value to the customer. It is claimed that in order to perform a comprehensive assessment a combination of financial, perceptual and behavioural measures is required.

Performance measurement in e-business environment has also been viewed under the Balanced Scorecard prism when taking into account external factors within the e-business context (Bremser & Chung, 2005). Clearly influenced by the NEBIC theory, this framework points out that constant change in e-business environment means continually evolving strategies new products and new technologies to adopt. It is also indicated that in collaborative environments an important component of an information system is the reporting of performance metrics.

Performance measurement has also been studied within the context of website usability and design (Palmer, 2002). Considering Marketing, IS and Media literature, the construct of website success appears to consist of three variables, namely: frequency of use, likelihood of return and user satisfaction. What becomes evident is that the set of metrics that derived from that piece of research will probably not be sufficient for any type of website, hence new metrics and evaluation frameworks need to be developed.

A brief review of the literature results in a twofold outcome. Firstly, there is a convergence of various domain theories but primarily between IS and Marketing literature. Constructs from both areas are considered essential in order to better conceptualise performance measurement of