Identifying Organizational Factors for Successful Business Intelligence Implementation

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ABSTRACT

Business intelligence (BI) has proliferated due to its growing application for business decision support. Research on organizational factors may offer significant use in BI implementation. However, a limited number of studies focus on organizational factors for revealing adverse impacts on effective decision support. The aim of this theoretical study is to conduct a literature analysis to identify organizational factors relevant to BI implementation. Through a systematic literature review, a qualitative content analysis on 49 relevant sample articles for generating themes inductively is adopted to reveal organizational factors. Findings suggest two contexts: information management that integrates factors such as technological capability and personnel capability and organizational context that integrates factors such as organizational capability, managerial decision, and organizational culture for facilitating embedding information management capability for BI implementation in businesses. It is hoped that these contextual understanding can be useful for further BI implementations.

KEYWORDS

Business Intelligence Implementation, Decision Making, Information Management, Organizational Factors

INTRODUCTION

Business intelligence (BI) became an essential integrated application for improving business decision support although its implementation is always critical for businesses and their performance improvement. Currently BI application has widely been proliferated because of its importance for strategic decision support in order to achieve various benefits, such as competitive advantages, cost reduction, improved efficiency and profitability (Isik, Jones, & Sidorova, 2013).

Effective decision making is an emerging aspect to address practical problems and steer uncertainty from the business environment (Chai, Liu, & Ngai, 2013). During the last few decades, business environment is witnessed with geopolitics and economic power (Lenssen et al., 2012), which have caused the major changes in customer preferences, technology’s roles in disparate instances, uncertainty in the future environment, and product lifecycle (Harraf, Wanasika, Tate, & Talbott, 2015). Major causes are experienced due to the rapid and often uncertain changes and environmental volatility (e.g. market deregulation, market competition, new emergent in technology, and business dynamisms) in the business environment (Cavalcante, Kesting, & Ulhoi, 2011), that create implausible competition. Competitive environment influences new inclusions in relevant technologies, while factors such as market competition, business policy, and global partnership are interconnected (Roldan, Cegarra, & Cepeda, 2014). Managers, in particularly small and median enterprises (SMEs), suffer from uncertain

DOI: 10.4018/IJBIR.2018070103

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changes and environmental volatility. The decision-making guides managers in relation to change adaptation in businesses (Kharabe, 2012). Therefore, the decision making is evident for the value creation of business. Although BI as decision making tool appears a problem-solving model (Chai, Liu, & Ngai, 2013), issues related to BI implementation within various decision-making situations are still remained an interesting topic for IS researchers and professionals.

As the decision making (in conjunction to various support processes) is one of the IS driven phenomenon, which requires an appropriate level of information support (Polasky, Carpenter, Folke, & Keeler, 2011), BI has been widely recognised due to its capacities of producing effective managerial decision support (Guarda et al., 2013; Olszak & Ziembia, 2006). BI is one of the integrated decision support systems (DSS) technological tool (such as Miah, 2009). For improving decision support, BI does not only conduct activities of detecting, collecting, storing, mining, and analysing raw data (Isik, Jones, & Sidorova, 2013), it also creates value of raw data through its transformation into useful information for the decision making (Guarda et al., 2013). Although BI implementation therefore becomes a business imperative for businesses including SMEs, discovering what factors contribute to BI implementation appears important.

The objective of the literature analysis study is to conduct a theoretical analysis and find out organisational factors that may contribute to have a successful BI implementation. Generating new understanding on how organisational issues are correlated to BI implementation is the particular objective of this literature analysis, which offers new knowledge for IS researchers and business practitioners in relation to BI implementation in future. According to Guarda et al. (2013), a framework encompasses required factors validates the project of BI implementation. Therefore, identifying organisational factors holds significant effects on successful BI implementation in the SME organization. The study conducts a comprehensive literature survey in order to collect articles and to examine their various key contexts, relevant to organizational factors associated to BI implementation. Highlighting the role of BI may indicate the aspect for which organizational factors are important in terms of BI implementation.

BACKGROUND

Importance of BI Implementation

Singh and Singh (2013) suggested that one of the key roles of BI system is to determine the business performance measurement, differentiate business problems, integrate information, and forecast the business future as well as relevant planning for the desired performance. In these regards, new and complex information emerging from diverse changes may open a new challenge for organizations (Gangadharan & Swami, 2004). Managers suffer from such challenges, and it is because they are to seek quality information on how to achieve competitive advantages. Therefore, information management (IM) is one of the business imperatives in terms of improving decision support (Isik, Jones, & Sidorova, 2013). According to Rodionov and Tsvetkova (2015), IM integrates three applications of IS that offer three impacts:

- Information infrastructure for technology-based needs;
- Information organization for creating the usability of given information;
- Information administration for information exploitation in the decision making.

Also BI implementation is directly related to the array of activities such as data gathering and warehousing, historical data recording, analysing, synthesising, and transforming them into decision support information (Burton, Geishecker, Hostmann, Friedman, & Newman, 2006; Singh & Singh, 2013). BI helps to process given information and create its usability for making the decision (Mathrani, 2014) using pertinent technology (Singh & Singh, 2013). As BI plays a significant role of IS in
Test-Driven Development of Data Warehouses
Sam Schutte, Thilini Ariyachandra and Mark Frolick (2011). *International Journal of Business Intelligence Research* (pp. 64-73).
www.igi-global.com/article/test-driven-development-data-warehouses/51559?camid=4v1a

Effects of Data Envelopment Analysis on Performance Assessment: A Cognitive Approach
www.igi-global.com/article/effects-of-data-envelopment-analysis-on-performance-assessment/124179?camid=4v1a