Institutionalization of Business Intelligence for the Decision-Making Iteration

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ABSTRACT

Business intelligence (BI) institutionalization has become a growing research area within the information systems (IS) discipline because of the decision-making iteration in businesses. Studies on BI application in improving decision support are not new. However, research on BI institutionalization seems sparse. BI institutionalization may positively contribute to a managerial role in using BI application repetitively for the decision-making iteration in businesses. This article aims to carry out an integrative literature review and report consolidated views of the body of knowledge. The study adopted a qualitative content analysis to generate themes about BI routinization in the decision-making iteration. Eighty-eight research articles were selected for the study. However, 57 articles were finally included for review. The findings suggest information management capability as the key necessity for BI application and its alignment with the organizational standard for BI institutionalization.

KEYWORDS

Alignment, BI Institutionalization, Business Intelligence, Decision-Making Iteration, Information Management, Organizational Culture

1. INTRODUCTION

Over the past decade, BI has been proliferated due to its increasing application for improving practitioner’s decision support in businesses (Popovic et al., 2012, Guarda et al., 2013). BI is the combination of technology, process and application of information supply chain and organization, the decision making, and action taking to gain desired performance of businesses (Burton et al., 2006, Watson, 2009). Increasing application of BI provides flexibility for the decision making to conduct competitive changes within the business environment (Poursahid et al., 2011). Unanticipated changes such as globalization, rival competition, new emergent in technology, new and complex information increase, the rapid increase of business competitors affect the mainstream of business performance (Jansen et al., 2005, Dimelis and Papaioannou, 2011, Cavalcante et al., 2011, Nepelski and De Prato, 2015). Therefore, change adaptation in businesses seems vital for which strategic decision making. The decision making is the process of steering uncertainty out and setting the desired action for organizations (Chai et al., 2013). The decision making considers analysis on diverse changes and explores possible problem-solving approaches to achieve competitive advantages emerging from those changes (Polasky et al., 2011). A prior decision making through appropriate analysis and exploration

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for possible future changes is important to manage those changes (Polasky et al., 2011). However, our study raises the issue of the decision making application for conducting ongoing changes happen within the environment.

In organizations, the changing phenomenon is always dynamic (Rolfe, 2010). The steady changes in customers’ preferences result in changing the business policy and adding new inclusion into the products and services to meet customers’ expectations. As a result, the business environment becomes more competitive (Seethamaraju and Sundar, 2013). Although studies on decision support, nowadays, become an emerging trend to address change adaptation into businesses (Chai et al., 2013), Maani (2013) raises the issue of the dynamic decision. The dynamic decision to iterate the decision-making process (Good, 2014). Polasky et al. (2011) argue that iteration of the decision making refers to the repetition of the decision making application as per needed to conduct unstable changes. Precisely, the decision making is an iterated process due to uncertainty and consistency of global changes (Polasky et al., 2011). As BI provides the decision making aids BI institutionalization is important for routinization of BI application in iterating the decision making (Pishdad and Haider, 2013, Nielsen et al., 2014). Pishdad and Haider (2013) argue that the term “institutionalization” of something offers routinization of its application. However, the limited focus was given on BI institutionalization in previous studies that represents a major deficient in IS research domain, while it is important for conducting the decision making iteration in businesses.

This study aims to conduct an analysis of literature and explore the integrated view about BI institutionalization for iterating the decision making in businesses. Generating a new understanding of issues related to BI institutionalization, and offering a new framework of knowledge are key objectives of this study that may help IS researchers and industry practitioners for their future BI institutionalization. The study has considered the qualitative content analysis for the study procedure. This approach is suitable for the social reality view of BI institutionalization.

2. THEORETICAL BACKGROUND

The current business environment is characterized with geopolitics and economic power (Lenssen et al., 2012), the complexity of new information, free market trading, and high intensity of competition because of rapid acceleration of technological advancement (Chi et al., 2009). Rapid changes in technology cause uncertainty, unstable customers’ preferences, and competitive intensity, which raise the issue of business survival (Harraf et al., 2015). The changing environment does not only provide negative impacts on businesses, but it also brings diverse opportunities in many instances. For example, investment increase, competitive products and services (Dethier et al., 2010), cost reduction, information flexibility (Berrone et al., 2013), knowledge and leadership development, and rapid communication (Cepeda et al., 2012) are the key effects of changes within the environment. Change adaptation appears vital for taking opportunities and encountering unexpected threats emerging from those changes, which may provide the business success. Therefore, change in existing decision or new decision making becomes important for guiding businesses to adopt new changes into the business.

2.1. The Decision Making for Change Adaptation

The decision making is defined as the selection of action and/or method managers/organizations use to conduct the changing environment associated with speedy responsiveness (Guarda et al., 2013). The decision making is a challenging task, particularly for the organizations, deal with big data flow within the business environment (Pourshahid et al., 2011). The decision making is also a problem-solving model that enables organizations to achieve competitive advantages through adjusting businesses beyond uncertain changes (Chai et al., 2013). For responsiveness to the changing environment (Roldan et al., 2014), the decision making provides cost deduction, flexibility of logistics, new technology adoption, and business operation regulation for business adjustment with rapid changes within market competition (Harraf et al., 2015), which creates the business value (Kharabe, 2012). Because, high-
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