

Investigating the Effect of Business Intelligence on Business Value Creation

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Abstract

Business Intelligence (BI), a technology-driven process, is considered as a strategic tool which includes the technologies used by enterprises for the data analysis of business information. The purpose of this study is to present a new model to investigating the effect of business intelligence on business value creation. A comprehensive literature review is conducted to identify the factors for the model development. The case study of this research is one of the research institute in Iran. The statistical population of this study is 90 employees of the institute which have been selected by simple random sampling. The researcher designed a Likert-based questionnaire to collect the data from this sample. Validity of the questionnaire was confirmed by the experts in the field of business. The reliability was confirmed by Cronbach's alpha. The results of regression analysis showed that variables of operational and strategic capabilities of business intelligence are effective in business value creation. In addition, the results indicated that knowledge management has a positive mediating effect on the relationships between operational capabilities of business intelligence and business value creation, and strategic capabilities of business intelligence and business value creation.

Keywords: Business Intelligence, Value Creation in Business, Knowledge Management, Organizational strategy

1. Introduction

According to Viva Business Intelligence (Okkonen, Pirttimäki, Hannula, & Lönnqvist, 2002), Business Intelligence (BI) is defined as “business intelligence is a continuous and systematic process producing and communicating actionable intelligence of the external business environment to facilitate proactive decision-making”. Business intelligence is a broad range of techniques, solutions and strategies aimed at collection, consolidation, analysis and providing access to information which allows the managers across the business to make better decisions (Chen, Chiang, & Storey, 2012; Işık, Jones, & Sidorova, 2013; Popović, Hackney, Coelho, & Jaklič, 2012). In fact, business intelligence is a set of skills, technologies and applications that are used to collect, store, analyse and provide efficient access to data warehouses to help organizations make the right decisions. Data analysis includes classification, clustering, statistical analyses, mathematical predictions, intelligent analysis based on neural networks, genetic algorithms and other machine learning techniques. The business intelligence can enhance the business decision-making in a global manner (Rouhani, Ghazanfari, & Jafari, 2012). Business intelligence

methodologies refer to the use of technology to collect and use effective information in order to enhance the productivity of an organization (Grigori et al., 2004; Lee & Park, 2005). The idea of business intelligence for employees, partners and institutional suppliers brings the ability to analyse and share information with each other. Using the roots of business intelligence in basic databases and operating systems, or more generally, using databases, and analytical processing tools, this tool provides a powerful set of useful technologies for different types of user and analytical needs (Fan, Lau, & Zhao, 2015). Implementing this methodology in organizations is part of the IT function and needs to be tailored to meet the specific requirements of the organization (Tutunea & Rus, 2012).

Knowledge, as an important source, has strategic importance to the individuals and organizations. According to (Schultze & Cox, 1998), Knowledge Management (KM) is defined as “the way that organizations create, capture, store, re-use and protect knowledge to achieve organizational objectives”. Knowledge influence the way of welfare for an individual, organization, or even a nation. The long-term success of an organization depends on the acquisition, storage and sharing of knowledge (Bhatt, 2001). Strategies that are designed based on the knowledge