



12th International Strategic Management Conference, ISMC 2016, 28-30 October 2016, Antalya, Turkey

## Using or Not Using Business Intelligence and Big Data for Strategic Management: An Empirical Study Based on Interviews with Executives in Various Sectors

Gökhan Silahtaroglu<sup>a\*</sup>, Nihat Alayoglu<sup>b</sup>

<sup>a</sup>*Istanbul Medipol University, Istanbul, 34810, Turkey*

<sup>b</sup>*Istanbul Medipol University, Istanbul, 34810, Turkey*

---

### Abstract

Information Technology being an inevitable part of our lives changes the way of doing business every five or eight years. This known as technological cycle. The technology we use today becomes obsolete in several years' time and managers have to adapt themselves to new systems and new management styles. When big data is so big and important, its usage for business planning and decision making is getting more crucial as well. Business Intelligence tools or Executive Information Systems are improving their ability with the help of the Big Data available. Executives may use the merits of new systems when they make their decisions easily and more accurately as subordinates do when they use computers for daily business operations. Today's software systems can help the top management with making long term business decisions as much as they can with tactical and operational activities. However, it is difficult to say that those tools are being used by the top managements as they should be. Executives avoid using them for different purposes. They may not refuse them but might simply think it is not the right time to depend on such a system when they make business plans.

In this study ten interviews have been conducted with the top executives of the firms which are doing business in various sectors. The executives talked about how or how much they use Executive Information Systems when they make decisions. The findings of the study partly cover expectations or anticipations of the authors.

© 2016 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Peer-review under responsibility of the organizing committee of ISMC 2016.

*Keywords:* Executive Information Systems; Big Dat; Decision Making; Top Management; Business Intelligence.

---

\* Corresponding author. Tel.: +90 444 8 444 E-mail address: [gsilahtaroglu@medipol.edu.tr](mailto:gsilahtaroglu@medipol.edu.tr)

## 1. Introduction

Tools and concepts which are related to information systems (IS) have the utmost importance when it comes to making strategic plans and decisions in business life. Today, firms invest on data in order to extract valuable information and use it for operational, tactical and strategic purposes. In fact, with the increase of computer hardware technology, data stored on various sources and thanks to the new data analysis techniques, nowadays predictive and prescriptive analysis have become much more accurate than they were just a few years ago. The top managements of companies trust dash boards, charts, tables, numbers and statistics when they make their final decisions. All these values, simply speaking, come from information systems like Management Information Systems (MIS), Decision Support Systems (DSS) and Executive Information Systems (EIS). These systems process data to generate or extract information and finally present it to the top management in the form of tables, charts or dashboards. They serve at different levels of decision making. These levels are operational, tactical and strategical. Recent studies reveal that IS are used with Big Data for various purposes in different domains. These systems are either built as standalone programs or a part of bigger information systems. When they are built and used a part of a bigger system they are usually called as Business Intelligence (BI). In business they are used both for tactical and strategical plans and decision making processes.

When it comes to management, terms like Big Data, BI and Data Mining are quoted very often. It may be thought that EIS are regularly used by chief executive officers (CEO). As it is well known executives make decisions either based on concrete findings and numbers or they holistically make decisions trusting their experience, intuitions and perceptions. Both ways may have yielded successful stories in business life. Although, modern information systems are capable of supporting executives accurately and they are easy to access, it is difficult say that they are not used as they should be. Executives who are usually very busy with trivial things cannot spare time to use an EIS. They leave this job to their assistants and sometimes they even fail to pick necessary reports from them. Software firms do offer and sell BI and EIS modules to companies, yet those modules are not used by executives properly enough. Although programs are installed on their laptops or personal computers, executives do not use them and even do not remember that they have a BI tool to be used by themselves but not someone else in the company. Therefore, development of technology and these tools does not reflect on business life as it could be.

In this study an empirical analysis has been conducted to show how much BI systems are used by executives. A literature review is given related to BI, Big Data and their usages in different sectors for various purposes. In the second part of the article, data collection and empirical analysis are presented and then results have been discussed under light of the hypothesis or expectations that “BI tools are not used by executives appropriately”.

## 2. Literature Review

Any level of information systems i.e. MIS, DSS and EIS, embody the tools which provide managers with profound information that may be used for competitive advantage and/or for executive decision making (Yu, Chen, Klein, & Jiang, 2015). These systems are formed, designed and produced to satisfy the needs of executives and support them with strategic decision making procedures and activities. Information Systems process data to retrieve and extract information. These data usually come from sources like organizations’ transactional databases, ubiquitous financial information on line, analytical data publicly available, external news services, market trends and so on (Yu et al., 2015). Creating an overall system which includes the three levels of IS, has brought up a new definition to information systems domain: Business Intelligence.

Business Intelligence (BI) is all of the processes involved in extracting valuable information from large data sets and presenting it to the top management in order to assist them in planning and decision making (Turban, CAMERON FISHER, & ALTMAN, 1988). These processes are:

- Accessing necessary data.
- Integration of data.
- Data cleaning and preparation.
- Deciding on machine learning algorithms and techniques.

Download English Version:

<https://daneshyari.com/en/article/5126048>

Download Persian Version:

<https://daneshyari.com/article/5126048>

[Daneshyari.com](https://daneshyari.com)