

# Readiness to Adopt Big Data Analytics in Private Sector Companies, Sri Lanka

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## Introduction

Organizations expand networks by opening up branches both locally and internationally through increasing their operations leveraging information technology. Modern businesses operate in the knowledge era where ceaseless efforts are required to capture opportunities in the environment (Tennakoon & Lasanthika, 2019). Researchers Kaisler et al. (2013) describes the concept of Big Data as the amount of data just beyond technology's ability to process, manage and store efficiently. Some organizations also use special term "BDA Technology", but the central idea behind them is the same (Mahesh et al, 2018). The report on Big Data - Global Market Outlook (2017-2026) stated that the global Big Data market accounted for \$31.93 billion in 2017 and is expected to reach \$156.72 billion by 2026 growing at a rate of 19.3% during the forecast period.

Some leading large scale companies in developed countries are actively and increasingly adopting Big Data Technology (BDT) to combat severe market competition, but many companies in developing countries such as Sri Lanka and India are still in the early stage of the adoption or sometimes they don't have even an intention of adopting BDT (Mahesh et al, 2018).

Organizational readiness for a system, technology or investment can be defined as those capabilities an organization needs to possess to be ready for a successful initiative (Williams & Williams, 2014). Since the mid of last decade, Big Data researchers and computer scientists mainly focused their research studies on technical and engineering aspects of Big Data (Lim et al, 2018). Scant research studies performed on technology management areas of Big Data. Hence, now it is high time to extend the research on big data in terms of its readiness by practitioners in the industry.

Since most of the available literature on Big Data is still in whitepapers, this study has found no theoretical framework that completely addresses all the aspects of its readiness. The TOE model assesses the organizational readiness for a technological initiative. Hence, present study adopted TOE framework (Tornatzky & Fleischer, 1990), to incorporate the technological, organizational and environmental constructs. The instruments adopted from previous literature (Motau & Kalema, 2017;

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Agrawal,2015, Salleh & Janczewski, 2016; Jorge, 2016) on BDA and organizational readiness.

### **Methodology**

Quantitative study performed distributing online questionnaire among IT professionals of 114 private companies registered under Colombo Stock Exchange which covers 20 sectors in Sri Lanka. Responses recorded using five point liker scale. Descriptive statistics and multiple regression analysis performed with the aid of SPSS Software for the purpose of data analysis.

### **Findings**

The Cronbach's alpha value recorded greater than 0.7 confirming the reliability of the study instruments. The results of Explanatory Factor Analysis assures the quality of data for the data analysis. The mean score (0.27) for big data readiness indicates the lower level preparation for BDA by private sector companies in Sri Lanka. IT infrastructure (0.376), Management support (0.376), Security (0.225), Firm size (0.225) and competitive advantage (0.204) found to be significant predictors of readiness for BDA. Organizational readiness is a critical scenario, as it governs optimal implementation of technology (Venkatesh et al., 2003; Rafferty et al., 2013). The findings of the present study are in line with those of other prominent researches in the area of big data technology; Mahesh et al (2018),Kalema & Mokgadi (2017), Cooper & Robert(1990), Tsai et al(2016), Agrawal (2015), Cohen & Levinthal (1990), Almoqren & Altayar (2016).

### **Conclusion**

Study assessed the big data readiness of private sector companies in Sri Lanka. The statistical results highlighted lower level readiness for BDA. The low preparation for big data technology will hinder the competitive gains that could gain over BDA. Data has become one of the powerful weapons in modern corporate world and the companies should focus on big data initiatives with considerable precautions. This study contributes to the scanty academic literature of BDA and findings will aid management to make informed decisions regarding BDA.

Keywords: Big Data Analytics, Organizational Readiness, Private Sector, Sri Lanka

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