



The Impact of Information Technology Infrastructure Flexibility and Behavioral Biases on Investment Decision Making

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ABSTRACT

Understanding the effects of information technology infrastructure flexibility (ITIF) and behavioural biases on investment decisions will help investors make more informed choices. Due to a lack of investment and decision-maker biases, Iraqi universities' IT infrastructure is not well developed, resulting in low performance. However, few studies look into the causes of this phenomenon. This study aimed to investigate the impact of ITIF and behavioural biases on investment decision making and their impact on organisations' performance. A total of 209 valid responses from decision-makers in private universities of the Republic of Iraq are analyzed. A set of statistical analyzes are performed with SmartPLS software. The results show that there is a significant impact of ITIF factors and behavioural biases on investment decision making. Also, investment decision making influences organizational performance. The research confirms the significance of ITIF and behavioural biases as critical indicators of organizational strategic decision making.

KEYWORDS

Behavioral Biases, Information Technology, Infrastructure Flexibility, Investors' Decision-Making

INTRODUCTION

Most new organizations use information technologies to accomplish their activities. IT's importance stems from its role as one of the main tools employed in the service activities of business organizations (Jabbouri et al., 2016). Customers' needs are constantly changing, resulting in a short product life cycle that necessitates a shift in these technologies (Chung et al., 2003). The concept of information technology infrastructure flexibility (ITIF) comes from a need to have IT that can face the rapid technology changes (Nurshuhada & Hafez, 2011). Since IT infrastructure is so essential in transmitting knowledge, many businesses put a lot of money into it (Hou, 2019). Few studies have examined ITIF as a dependent variable (Anwar et al., 2018). The organizations' possession of immutable infrastructure will impede the organization's performance of its activities and increase costs and the inability to meet

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customers' needs (Makhloufi et al., 2018). Also, the lack of flexibility of information technology will lead to delays in the completion of new projects and a decline in the organisation's performance (Masa'deh, 2013). The importance of understanding the effect of ITIF cannot be overstated. It aids in rationalising investor decisions and determining which aspects should be considered when deciding whether to invest in information technology that aid in productivity and effectiveness. The link between IT investment and a firm's performance has been discussed in the scientific literature (Bardhan et al., 2013; Lee et al., 2016). The study conducted by (Harris & Katz, 1991) revealed a relationship between companies' performance and the level of investment intensity in information technology. Some researchers argue that IT investment relates indirectly to a firm's performance through contextual factors (Bharadwaj, 2000; Campbell, 2012).

Decisions in general, and investment decisions in particular, are influenced by many factors, the most important of which is biased behavior (Kartini & Nahda, 2021).

Bias is defined as making unfair judgments due to personal beliefs and opinions. Irrational attitudes or behaviours that may unintentionally affect the human decision-making process are known as behavioural biases (Shaikh et al., 2019). The topic of investor behavioural biases is one of the topics that have attracted many researchers recently (Isidore R. & P., 2019). The availability of information is a prerequisite for rational decision-making (Al-Sabaawi and Dahlan, 2018, 2019). Generally, people make poor decisions due to a lack of information (Kumar & Goyal, 2016). Behavioural biases in investment decision-making are considered irrational (Jhandir & Elahi, 2014). Some studies have found that investors with limited knowledge are more vulnerable to problems (Madaan & Singh, 2019). Investors often face uncertainty resulting from the quality and quantity of available information (Fernández *et al.*, 2011). Most of the scientific studies related to behavioural finance have indicated behavioural biases among various investors. However, limited studies show the impact of ITIF on the decision to invest in technologies (Anwar & Masrek, 2015).

Similarly the effects of herding bias among individual investors got limited attention in the literature (Fernández et al., 2011); (Kumar & Goyal, 2015). In a developing country like Iraq, such research is scarce (Zahera & Bansal, 2018). Therefore this study attempts to find the effects of ITIF and herding bias on the investment decision making process and firm's performance in the Iraqi context.

The research aims to answer a set of questions: Do flexible information technologies affect investment decision? Do behavioural biases affect the decision to invest in information technology? Does the decision to invest in technologies affect the performance of organizations? The rest of the study is organized as follows. Section 2 discusses the theoretical background of the study. Section 3 explains the research methodology. The data analysis results are presented in section 4. The discussion and conclusion are presented in section 5 and section 6.

RELATED WORK

The term infrastructure in a technical context refers to the components of networks and platforms of technical architecture (Ness, 2005). The Information Technology (IT) infrastructure consists of two main parts: the technical infrastructure and the human structure (Chanopas et al., 2006). Infrastructure is discussed in two levels. The primary technical components represent the first. The second is represented by the resources and administrative aspects affecting the infrastructure's design (Duncan, 1995). The IT infrastructure is the foundation for IT capabilities that enable the development of technical applications and support organisations' activities (Anwar & Masrek, 2014). Information technology infrastructure is a factor in the success of organizations (Mohamad et al., 2017).

Many studies adopt the technical viewpoint of infrastructures, such as hardware, software, and communication technologies (Duncan, 1995). Others believe that information technology infrastructure is a multi-faceted term that includes, in addition to the technical side, human aspects such as expertise and skills (Isal et al., 2016). Flexibility means, in the administrative literature, the ability of a resource

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