The Role of the Owner-Manager in SMEs’ Adoption of Information and Communication Technology in the United Arab Emirates

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ABSTRACT

This study evaluates the factors that lead small to medium-sized enterprises (SMEs) to adopt information and communication technology (ICT). Our research proposes an ICT adoption model using structural equation modelling that examines the role of SMEs’ owner-managers as mediators in the adoption of ICT. The model is focused on the investigation of the direct and indirect influences of technological, cultural, environmental and organisational factors on the SME’s adoption process. The results indicate the validity of these adoption factors and their applicability to the United Arab Emirates (UAE) environment. The main focus of the research was to develop a new framework that develops further the research of Rashid and Al-Qirim (2001). The present paper identifies the critical mediating role of the owner-manager’s decision to adopt ICT in SMEs in the UAE, and confirm the importance of technological, organisational and environmental factors in the adoption process. Although there is cultural diversity in the UAE, culture is not found to be a significant factor; either directly or indirectly, in SMEs’ ICT adoption in the country.

Keywords: ICT Adoption, Information and Communication Technology (ICT), Owner-Manager Factors, Small to Medium-Sized Enterprises (SMEs), Structural Equation Modelling, UAE Environment, United Arab Emirates (UAE)

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INTRODUCTION

The issue of the adoption and use of information and communication technology (ICT) in small to medium-sized enterprises (SMEs) has been studied extensively in both developed and developing countries (Haller & Siedschlag, 2008; Kaynak, Tatoglu, & Kula, 2005; MacGregor & Vrazalic, 2005; Mutula & Brakel, 2007). However, much of the research focuses on the barriers to adoption, identifying external and internal factors likely to cause slow uptake and use of this new technology. Only limited research has focused on the role of the owner-manager in its adoption (Martin, 2005; Windrum & Berranger, 2004). Given the limited empirical research on SMEs in Arab countries, our research will focus on the role of the owner-manager in ICT adoption in the United Arab Emirates (UAE). This is a country whose ICT adoption in the SME sector has previously seen very limited research, even though it has the highest ICT usage in the Middle East and was ranked 20th globally for internet host penetration by the European IP association. According to the Internet World Statistics (Jazara, 2009), the UAE’s internet penetration is 49.8% and more than 44% of the population have access through smartphones.

The UAE’s government has encouraged the development of the ICT sector, and has made it a top strategic priority, as an enabler of competitive advantage within the economy. This has put the UAE 24th in the world and first in the Arab world in terms of leveraging ICT for increased economic diversification and competitiveness, according to the Global Information Technology Report 2012 produced for the World Economic Forum and INSEAD (WEF, 2012). Results from the Network Readiness Index showed a growing trend within the UAE of leveraging ICT to increase economic prospects and improve global competitiveness.

Our study investigates SMEs in the UAE, and influences on the owner-manager’s adoption process. Using structural equation modelling (SEM), we develop a model of the factors that affect adoption, mediated by the role of the owner-manager. We aim to add to the body of literature by giving a clearer understanding of the role of the owner-manager in the process of adoption. The paper also provides an insight into why SMEs adopt ICT in the UAE and which factors contribute to improved adoption by SMEs in this important part of the world. In the following section, we will discuss the background literature on the factors that shape ICT adoption in SMEs. We then propose a hypothesised model and outline the rationales for the research hypotheses. The research methods used in the study are explained, in particular the application of SEMs. We then discuss the findings of our model and, finally, the implications of this research.

LITERATURE REVIEW

Policy-makers widely acknowledge the importance of the production, dissemination and use of ICT in enhancing economic growth, job creation, competitiveness and public welfare. However, the uptake of ICT in the Middle East has been slower than in other economies. The educational level of the chief executive officer (CEO) has been identified as a significant determinant of the adoption of ICT by SMEs (MacGregor, 2004). Other studies have identified different factors that influence such adoption, including technological, organisational, environmental and individual aspects of the firm. Issues associated with these factors are illustrated in Rashid and Al-Qirim’s (2001) framework of e-commerce technology (ICT) adoption by SMEs (MacGregor, 2004). Other studies have identified different factors that influence such adoption, including technological, organisational, environmental and individual aspects of the firm. Issues associated with these factors are illustrated in Rashid and Al-Qirim’s (2001) framework of e-commerce technology (ICT) adoption by SMEs (Figure 1). All or any of the four influencing factors may impact upon the process of ICT adoption.

This study adapts the framework of Rashid and Al-Qirim (2001) to the context of the UAE. Because of the uniqueness of the UAE’s culture in terms of diversity (there are more than 202 nationalities working in the UAE), we have added culture to this framework. Also, as we consider the role of owner-manager to be critical to the process of ICT adoption, we have included owner-manager factor as a mediator in this relation, rather than independent factor,
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