Chapter VIII
Mapping Factors Influencing EAI Adoption on the Adoption Lifecycle Phases in LGAs

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ABSTRACT

Literature indicates several private and public organisations have adopted Enterprise Application Integration (EAI), however its application in the Local Government Authorities (LGAs) is limited. Although, there exist few EAI adoption models, these models mainly focus on a number of different factors (e.g. benefits, barriers, cost) influencing the decision making process for EAI adoption. Moreover, these models do not illustrate factors influencing the decision making process for EAI adoption on the adoption lifecycle phases. Literature indicates that the adoption process involves a sequence of phases an organisation passes through before taking the decision for adoption. This exemplifies that LGAs may also have to pass through several adoption phases before taking the decision to adopt EAI. However, due to the multiplicity of factors it may not be easy for LGAs to take decisions to adopt EAI by merely focusing on different factors. This may impede the decision making process for EAI adoption in LGAs. Notwithstanding, the implications of EAI have yet to be assessed, leaving scope for timeliness and novel research. Thus, it is of high importance to investigate this area within LGAs and result in research that contributes towards successful EAI adoption. This chapter makes a step forward as it: (a) presents four adoption lifecycle phases, (b) tests the adoption lifecycle phases, and (c) mapping the factors influencing EAI adoption on the adoption lifecycle phases, through three case studies. Hence, it significantly contributes to the body of knowledge and practice. In doing so, provides sufficient support to the decision makers for speeding up the decision making process for EAI adoption in LGAs.

INTRODUCTION

Literature indicates that several researchers have proposed EAI adoption models e.g. Themistocleous (2004) proposed EAI adoption model in multinational organisations, Khoumbati (2005) followed the stream by evaluating and proposing a model for EAI adoption in healthcare organisations, Mantzana (2006) utilised Khoumbati (2005) EAI adoption model and extended the research area in healthcare sector, by identifying the healthcare actors involved in EAI adoption process and the causal relationships among the healthcare actors and factors that influence EAI adoption. In the area of LGAs, Kamal *et al.,* (2008); Kamal and Themistocleous (2006, 2007) proposed and tested an EAI adoption model. Chen's (2005) model differs from other existing EAI adoption models, as Chen (2005) did not specifically research on EAI; instead Chen (2005) identified the significant differences in the way Small and Medium Enterprises (SMEs) and large companies approach integration technologies.

These models mainly focus on a number of different factors (e.g. benefits, barriers, costs) influencing the decision making process for EAI adoption. In addition, there are differences indicating that the factors that influence the decision-making process for EAI adoption differ from one type of organisation to the other depending among others on the nature and size. For instance, one set of factors is used to support EAI adoption in SMEs and another in large organisations, whereas, there are differences among influential factors that are used in private sector, healthcare organisations and the local government authorities. The aforesaid EAI adoption models do not: (a) address the adoption lifecycle phases and (b) illustrate which factor(s) influence the decision making process for EAI adoption on the adoption lifecycle phases. Rogers, (1995) suggests that adoption process involves a sequence of phases an organisation passes through before taking the decision to adopt a technological solution(s). In the context of technology adoption, several researchers propose diverse phases in their technology adoption processes e.g. Kamal (2006), Frambach and Schillewaert (2002), Gallivan (2001) and Darmawan, (2001). On the contrary, in the context of EAI implementation, several researchers put forward different phases in their EAI implementation process e.g. Lam and Shankararaman (2004), Themistocleous and Irani (2006) and Reiersgaard *et al.,* (2005). Technology adoption process illustrates several phases that focus on both the pre- adoption and post- adoption phases, whereas, EAI implementation process exhibits post- adoption phases. Despite their contribution to the technology adoption and EAI implementation area, the authors do not cover these phases in the context of this research.

The reason is that the current research investigates on the adoption lifecycle phases and mapping of factors influencing the decision making process for EAI adoption in LGAs on adoption lifecycle phases and not on EAI implementation phases or beyond. In the area of mapping the factors influencing EAI adoption, Khoumbati and Themistocleous, (2007) proposed a modelling technique i.e. Fuzzy Cognitive Mapping (FCM) simulation to evaluate EAI adoption in healthcare organisations. Nevertheless, their research merely demonstrates the causal inter-relationships between the EAI adoption factors (Khoumbati and Themistocleous, 2007) and does not interpret the mapping of the factors influencing EAI adoption on the adoption lifecycle phases. Thus, it can be argued – despite the fact that the private and public organisation's decision to adopt EAI may in fact be the most important development for integrating their heterogeneous IT infrastructures. Nonetheless, to the best of the authors' knowledge, there is lack of broad-based theoretical and empirical research on mapping the factors influencing the decision making process for EAI adoption in LGAs on the adoption lifecycle phases. Thus, given the increasing attention to EAI adoption by academics (Mantzana, 2006; Khoumbati, 2005; Them-

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