The influence of technology, organizational and environmental factors on cloud computing adoption by Malaysian IT small and medium enterprises

ABSTRACT

Introduction: Malaysia's adoption rate of cloud computing (CC) remains low, despite the Government 's initiatives to create a digital economy and accelerate technology adoption. In this context, this research investigated the adoption of CC by Malaysian IT-based small and medium enterprises (SMEs) in the Klang Valley, Malaysia. Based on the literature, the Technology-Organization-Environment (TOE) framework was considered appropriate for this study with the incorporation of the variables of the organizational context (OC), environmental context (EC), cloud computing risks (CCR) for the SMEs' adoption of cloud computing (A). Methodology: A quantitative approach, with a web survey, was used to analyse the factors that influence the adoption of CC by SMEs.The targeted population comprised Malaysian IT-SMEs in the Klang Valley.300 questionnaires were di stributed, and the responserate was 57% translating to 170 usable and complete questionnaires. Partial Least Square – Structured Equation Modelling (PLS-SEM) was used to analyse the data. Findings and discussion: The findings from the statistical analysis revealed that both the organizational and environmental contexts significantly influence the SMEs' CC adoption.While there was a similar result for CC risks, it however indicated a negative influence towards CC adoption.Conclusion and recommendations: The research findings provide for a great erunderstanding of the important factors for the adoption of CC by the IT SMEs.The findings extend the body of knowledge, particul arly to SMEs owners and managers, on the factors that influence the adoption of CC technology and the recommendations offered can lead to increasing the adoption rate by Malaysian IT SMEs.

Keyword: Cloud computing; TOE; Environmental context; Organizational context; Cloud computing risks