Abstract

Increased Information and Communication Technology (ICT) adoption among small and medium-sized enterprises (SMEs) has enhanced the ability of firms to gain competitive advantage not only locally, but also in the international markets. In recent years, we have witnessed significant ICT developments among SMEs in developing countries. This study examined the factors influencing ICT adoption, as well as its usage among SMEs in the tourism sector in Tanzania. The study took into consideration the Technology-Organisation-Environmental (TOE) characteristics influencing the adoption and usage of ICT among SMEs. The study also examined the indirect effects among TOE characteristics on the adoption of ICT among the SMEs. The term ICT in this study is also used to refer to other information technology terminologies used in the innovation literature, for example, e-commerce, e-business, the internet, and web technologies. We also use the term entrepreneur and owner-manager interchangeably.

Our study aimed at filling the empirical gap by studying the factors influencing or limiting ICT adoption and usage among SMEs in the tourism sector in Tanzania. A review of the literature showed that there is little empirical research conducted in Tanzania focusing on ICT adoption and usage among SMEs. The study also sheds light on the conflicting conclusions drawn in previous ICT adoption and utilisation studies.

Data collection was carried out in Tanzania. The key informants were the individuals responsible for making decisions on matters related to ICT adoption and usage within their SMEs. In this regard, a questionnaire-based survey was used to collect data from 338 SMEs. However, 295 questionnaires qualified for the data analysis. The net actual figures indicate that Arusha was represented by 86 SMEs, Dar es Salaam was represented by 62 SMEs, Zanzibar was represented by 94 SMEs, and Kilimanjaro was represented by 53 SMEs. The profiles of the respondents and the organisations were analysed using descriptive statistics. The descriptive statistics include techniques such as: sample dispersion measurements, sample distribution measures, central tendency measures, and tabulations techniques.

The testing of the hypotheses involved several data analysis techniques which included correlation analysis, factor analysis, multiple regression analysis and structural equation modelling (SEM). The study findings indicate that most of the SMEs have adopted e-mail and some basic applications of web technologies. This study has also confirmed that the private sector is leading in the ICT initiatives.

The study continues with factors influencing the adoption of e-mail and web technologies (EWA). Among the ten factors tested, it was found that only compatibility, organisational e-resources and competitive pressure significantly influence EWA. Additionally, EWA is indirectly determined by competitive pressure mediated by organisational e-resources.

On the other hand, we find varying conclusions on the effects of TOE characteristics on the usage of e-mail and web technologies (EWU). We classified EWU along business communication, online presence, and online trading. The significant factors influencing business communication include: relative advantage, compatibility, complexity, organisational e-resources, top management support, competitive pressure and technological support. Online presence is influenced by relative advantage, complexity, organisational e-resources, top management support, competitive pressure and non-technological support. Online trading is influenced by compatibility, organisational e-resources, top management support, competitive pressure and technological support.
Our study has implications to various stakeholders involved in ICT and the tourism business in Tanzania as well as the research community. The theoretical implications provide the benefits of the study in the ICT adoption and diffusion literature. The practical implications apply to SMEs, training institutions, ICT vendors and consultants, and the government of Tanzania.