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The Impact of Personal Privacy on the Acceptance of Mobile Phone Technology: A case of Tanzanian SMEs

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ABSTRACT

The adoption of mobile technology has gained a serious attention in organizations and individuals. SMEs in the developing countries have hugely been relying on mobile phone technology in performing their activities. The main reasons for the popularity of mobile phones include their perceived low cost, less learning curve, mobility and its compatibility with the usage at the SMEs level as compared to the desktop computers. Despite existence on studies on adoption of mobile technology in different contexts, few of them have explicitly explored the way personal privacy can affect its acceptance to be used at the workplaces.

This study covers this gap by conducting a survey to assess whether or not personal privacy has an impact on the intention and usage of mobile phones among the employees of SMEs. The results show that personal privacy is influencing perceived usefulness of using mobile phones in the SMEs while it has no impact to the Behaviour intention to use. The discussions, implications, and suggestions for future work were also discussed

KEYWORDS: SMEs, Mobile Phone Technology, SEM, AMOS, TAM, ICT and Personal Privacy

INTRODUCTION

The acceptance of technology has been discussed in a number of studies (Byomire and Maiga, 2015; Davis, 1989; Prieto et al., 2015; Venkatesh et al., 2003). Key factors, which influence making decisions to use a technology, have been proposed and tested in multiple contextual environments. The areas which are mostly studied when assessing the acceptance of technology include understanding and predicting users' behaviour in domains such as voting, dieting, family planning, donating blood, women's occupational orientations, breast cancer examination, choice of

transport mode, turnover, using birth control pills, education, consumer's purchase behaviours, and computer usage (Crotty, 1998; Taherdoost, 2018).

The existing technology acceptance models explain the factors which describe the behaviour of users of technology as they use it (Sun et al., 2013). The causal relationships between the factors are analysed on the extent to which they influence individuals intentions to use a technology in the near future (Ajzen, 1991). Therefore, the theories which fit this category are those which explain the acceptance and rejection of technology as it is used by individuals.

Examples of the models which best explain individual adoption include the Theory of Reasonable Action (TRA), the Theory of Planned Behaviour (TPB) (Ajzen, 1991), the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003) and Technology Acceptance Model (TAM) (Davis, 1989). These models/theories can be applied to explain the intentions of using mobile phone technology by individual employees of Tanzania tourism SMEs.

Within the SMEs, mobile phones are used by individuals to perform both work and personal obligations. In traditional computing counterparts, both users and computing device are stationary and the use of the device takes place at the same place and familiar location which in turn leads to the perception that most of use of traditional computing technology is for the benefit of the company (van Biljon and Kotzé, 2007). Mobile devices change the physical, social and cultural contexts in which users interact with the system (Ruuska-Kalliokulju et al., 2001). The ability to use mobile devices at any time and allows employees to perform multiple activities poses a challenge to determine whether the demand for personal privacy can have an impact on its acceptance among the employees of SMEs.

The next sections of this paper are organised as follows. Section two defines SMEs in the context of Tanzania. Section three discusses the meaning of TAM and in which contexts it can be used. Section four discusses the concept of personal privacy and present the rationale for including it as among the potential factors to be extended to the TAM model in this study. The rationale for formulating the hypotheses are discussed in section five followed by research methodology in section six. Section seven presents the results of this study while section eight discussed the impact of personal privacy towards the acceptance of mobile phone technology in SMEs. Section nine is a conclusion of this article.

SME'S

The existing literature includes various definitions of SMEs. Most definitions of concepts are available in the business commerce, development and economics literature (Mutula, M and Van Brakel, P, 2006). These differ by region, for example, The Organization for Economic Co-operation and Development (OECD) definition is based on employment figures and define SME as have less than 500 employees (OECD, 2004). In Britain, SMEs are enterprises which have an annual turnover of £2 million or less with fewer than 200 paid employees, In Australia, SMEs are defined as enterprises with between five and 199 employees (Migiro, 2006). The European Union define a micro-business as a company with less than 10 employees and an annual turnover and balance sheet total not exceeding €2 million. In the EU small businesses have fewer than 50 employees with an annual turnover which doesn't exceed €10 million and balance sheet total is beyond €10 million (Avram and Kühne, 2008). Medium business is defined by EU as those have less than 250 employees, turnover does not exceed €50 million and the annual balance sheet total is beyond €43 million (Avram and Kühne, 2008). The World Bank defines a micro-scale company as the one having less than 50 employees, a small-scale company as having 50 employees and a medium-scale company as having 50-200 employees (Kiriş and Kiriş, 2008). The existence of various definitions of SMEs in different context means that there is a need for identifying the definition of SMEs in the Tanzanian context.

In Tanzania, SMEs are the companies that are limited to the number of headcounts and profit or capital. However, they assert that the definition of small businesses might vary from country to country or from sector to sector. The Tanzania Small Industries Development Organisation (SIDO) uses the definition in Table 1 but also highlights that in the event of an enterprise falling under more than one category, the level of investment will be the deciding factor (SIDO, 2002).

Table 1: The description of the definition of Small, Medium and Large enterprises (Adopted from (SME Policy, 2013))

Type of Enterprise	Micro	Small	Medium	Large
No. of Employees	0-4	5-49	50-99	100 and above
Working Capital	<\$2.8k	2.8k-<\$111.1k	111,.1k-≤\$444.4k	>\$444.4k

TECHNOLOGY ACCEPTANCE MODEL

Technology Acceptance model explains factors which influence individuals to accept or reject a technology (Davis, 1989). TAM theorises that when users are subjected to the use of a particular technology, there are several factors which influence their decisions on how and when they will use such technology (Davis, 1989; Yueh et al., 2015).

With TAM, the acceptance of technology is explained by two perceived usefulness (PU) and perceived ease of use (PEU). PU is whether the technology will enhance the user's job performance whereas PEU refers to what extent using the system will be free from the effort (Davis, 1989). The integrity of original TAM has been tested through a number of empirical studies, which extends the model to different settings, providing consistency and good re-test reliability and confirming its validity (Lindsay et al., 2011; Venkatesh and Davis, 2000). Therefore, the author used TAM to perform the influencing relationship of perceived personal privacy to the overall acceptance of mobile phones in the SMEs.

PERSONAL PRIVACY

Privacy has been discussed as among the key security concerns in technology management. The privacy which is discussed in this article is the extent of personal time that employees of SMEs are having without being disturbed to engage into performing job roles just because they have their mobile phones all the times. Some studies which discuss privacy and security issues on using mobile-based applications include Rumanyika, J (2015) who studied the security risks in using mobile banking in Tanzania and the study of Rumanyika and Mashenene (2014) who studied the impediments of e-commerce adoption among Tanzania SMEs. In both cases, they found that data privacy is one of the key bottlenecks in using a technology. While such previous studies were looking at privacy in terms of security, this study discusses privacy in terms of the extent of employee's time (Tassabehji et al., 2008). The 33 focus group sessions study conducted by Jarvenpaa and Lang (2005) covering China, Finland and USA in examining the user experience in using mobile technology in working places reported paradoxes which shape user experiences and behaviours.

“Unlike desktop or even laptop computers, the mobile phone is typically always with its user, rarely separates from its owner, and it is in use, or ready for use, all the time” (Jarvenpaa and Lang, 2005).

The view of prominent philosophies of technology asserts that technology has destroyed distance by destroying closeness such that it tends to create a situation where everybody is at the same time close and far, independent of geographical distance (Arnold, 2003). This technological paradox has been observed and heavily exhibited by mobile phone usage (Arnold, 2003; Jarvenpaa and Lang, 2005). Jarvenpaa and Lang (2005) found that despite the fact that mobile technology had made some improvements to their lives in terms of convenience, flexibility, connectedness, and new freedoms of choice, there were some conflict situations they had encountered in terms of circumstances that prompt users to take actions whose consequences clash with their original intentions or expectations..

Personal privacy has a positive relationship with the mandated use of mobile phone technology (Jarvenpaa and Lang, 2005). From the individual user's perspective, mobile phone technology results in "less personal time" and "the inability to separate and keep a distance from work which results to a collapse in the desirable boundaries between work and leisure" (Arnold, 2003; Jarvenpaa and Lang, 2005). It also results in an expected state of constant availability, resulting in a negative impact on employees' well-being and interpersonal relationships (Sarker and Wells, 2003).

Kwon and Chidambaram (2000) asserted that users of mobile phones are likely to feel pressure and disturbances when they use them for work-related purposes. On the other hand, Ng-Kruele et al (2002) assert that effective mobile commerce typically requires a system which keeps a detailed dynamic updated file of individual users. Ng-Kruele et al. (2002) highlight the concept of cost balancing by arguing that the private information which is disclosed in such exchanges establishes a significant but hidden aspect of the cost of using mobile commerce applications.

"The benefit offered by each "convenience" is, in general, associated with a loss of privacy" (Ng-Kruele et al., 2002).

Therefore, despite the fact that this construct has not been clearly explained in TAM, the hypotheses which were found to validate them in the study of Tassabehji (2008) are used.

HYPOTHESES FORMULATION

Referring to the TAM, Perceived Usefulness (PU) tends to influence behaviour intention (BI). Also Perceived Ease of Use (PEU) influences the Behaviour Intention (BI) to use a technology (Davis, 1989). In addition, PEU influences PU due to the fact that, PEU indirectly tends to influence the intention to adopt technology and finally its usage (Gallego et al., 2008; Peng et al., 2012; van Biljon and Kotzé, 2007). Therefore, the following are the hypotheses which were adopted from TAM to this study.

H1a: Perceived ease of use (PEU) of mobile phone technology will positively influence the employees' perceived usefulness (PU)

H1b: Perceived ease of use (PEU) of mobile phones will positively influence the employee's behaviour intention (BI)

H1c: Perceived usefulness (PU) of mobile phones will positively influence the employee's behaviour intention (BI)

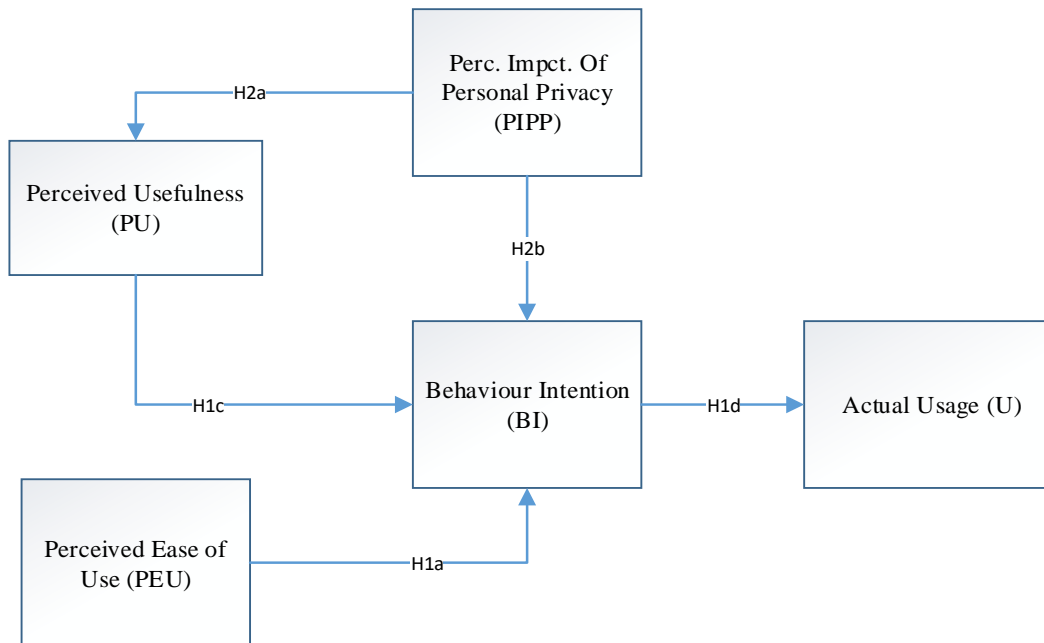
H1d: Employees behavioural Intention (BI) of using mobile phones on will influence its actual usage (U)

Concerning the impact of personal privacy on the acceptance of technology, a new factor which represents personal privacy was added to a TAM. This new factor was called the Perceived Impact of Personal Privacy (PIPP). Based on the arguments from the reviewed literature, this study proposes the following hypotheses:

H2a: Perceived Impact of Personal Privacy (PIPP) in using mobile phone technology will positively influence its perceived usefulness (PU)

H2b: Perceived Impact of Personal Privacy (PIPP) in using mobile phone technology will positively influence its behavioural intention (BI)

Based on the hypotheses which were proposed, a theoretical model was constructed and presented in Figure 1. This model was then tested through a survey in order to identify whether or not the hypothesised relationships are statistically significant.

Figure 1: A Theoretical Model of the study (Author)

RESEARCH METHODOLOGY

The data was collected from 459 individuals who work in the Tanzanian SMEs performing the tourism activities like bars and grocery, transportation, hotels, travel agents, car rentals, restaurants as well as sports and recreational companies. This sampling definition followed the OECD categorisation of tourism industries. The respondents were from three regions of Tanzania; Dar es Salaam, Kilimanjaro and Zanzibar. The survey response rate was 92%. To ensure that the questionnaire conforms to ethics requirements and risk management, the respondents were educated for the reasons for collecting data and how will be used. In addition, respondents had an option to withdraw from the data collection process whenever a respondent wish to.

Since the aim of this study was to test the proposed hypotheses, the analysis of data was performed using Structural Equation Modelling (SEM) and the software used was AMOS software version 22. All factors had Average Variance Extracted (AVE) values of greater than 0.5, indicating that they have attained minimum validity requirements (Awang, 2015). As seen in the structural model in Figure 2, the factor loading of the measurement items was all larger than 0.5 after adjusting

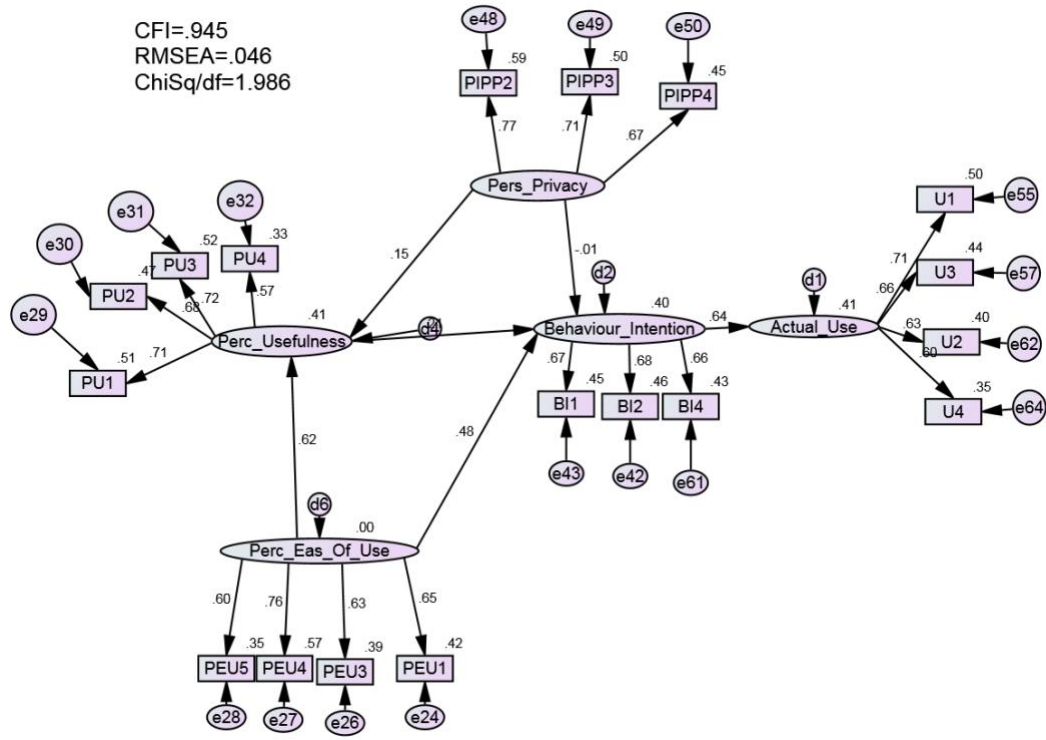
the modification indices showing that the unidimensionality condition was also achieved. Also, the model fit indices are as seen in Table 2 in which all the minimum values were attained in accordance to (Awang, 2015; Hair et al., 2006).

The questionnaires were prepared to include measurement items of each of the constructs. The validity of the questionnaires was assessed by performing face validity to the experts as well as performing Item Content Validity Index (I-CVI)(Polit and Beck, 2006). The assessment of outliers and normality were also performed. The normality details show that the multivariate critical ration (c.r) was greater than 5 which is the recommended threshold value (Baraldi and Enders, 2010). Therefore, the normality aspect will not cause any significant impact on the end results. The tolerance for correlations was found to be above 0.25 which is the minimum recommended value (Huber and Stephens, 1993). Also, the multicollinearity details showed that the Variance Inflation Factor (VIF) values were all less than 10 which is also acceptable in accordance to Hair et al (2008). This means that the factors which have been extracted from the data do not have multicollinearity problem.

Table 2: Model Fit Indices of the Model

Model fit parameter	RMSEA	CFI	ChiSq/df
Required value	<0.08	>0.90	<3.00
Attained Value	0.046	0.945	1.986

Figure 2: A Structural Model of the study



RESULTS AND DISCUSSIONS

The structural model was run and the estimates in the regression analysis yielded the information shown in Table 3. This table displays the information necessary to interpret the hypotheses of the model which was tested against the data. Since the moderating constructs Eas are not tested at this stage, these results measure only direct relationships depicted in the model.

Table 3: Path Analysis results for a model

Standardised Regression Weights			Estimate	S.E.	C.R.	P	Label
Perc_Usefulness	<-	Perc_Eas_Of_Use	0.753	0.088	8.551	***	H1a
Perc_Usefulness	<-	Pers_Privacy	0.131	0.048	2.724	0.006	H2a

Behaviour_Intention	<-	Perc_Usefulness	0.172	0.067	2.547	0.011	H1c
Behaviour_Intention	<-	Perc_Eas_Of_Use	0.476	0.088	5.399	***	H1b
Behaviour_Intention	<-	Pers_Privacy	-0.01	0.041	-0.233	0.816	H2b
Actual_Use	<-	Behaviour_Intention	0.738	0.089	8.323	***	H1d

Where: C.R-Critical Ratio, S.E-Standard Error, ***P<0.05

This study hypothesised that perceived ease of use has a direct influence on perceived usefulness. This has been also supported by a number of studies in the context of acceptance of mobile phone technology (Gallego et al., 2008; Kwon and Chidambaram, 2000). The results of this study support the hypothesis H1a. That means the more the employee perceives that mobile phones are easy to use, the more they perceive that it is useful to them. One of the studies which have not identified the relationship between perceived ease of use and perceived usefulness is the study which investigated the initial acceptance of integrating mobile commerce into an organisational process (Gribbins et al., 2003). In such a study, the users were unaware of how mobile wireless mobile commerce will improve business processes when integrated to the existing applications. That study was still a pilot study in which the mobile commerce systems were not yet there so users had a poor experience in using a technology. Thus there is a high probability that they were not sure of how the system can be easy to use. The challenge of assessing the factor concerning a system which is not applicable at the time of study is mainly on understanding the measurement items in the user perspectives.

The direct influence of perceived usefulness to behaviour intention (H1c) was also hypothesised in this study. The results show that the relationship between perceived usefulness and behaviour intention in the Tanzanian SMEs was supported. This suggests that the perception of the usefulness of mobile phone technology in their activities tends to influence their intention to use it in future. This observation is in line with a study on the employee acceptance of integrating mobile commerce in their workplaces in which perceived usefulness have a significant influence on their behaviour intention (Gribbins et al., 2003).

The direct Influence of perceived ease of use on behaviour intention (H1b) was also found to be supported. This finding is in line with the context of acceptance of smartphones (Chen et al., 2009) and employees acceptance of mobile commerce (Gribbins et al., 2003). This implies that if employees of SMEs perceive that it is easy to use mobile phones then it will be useful in their work.

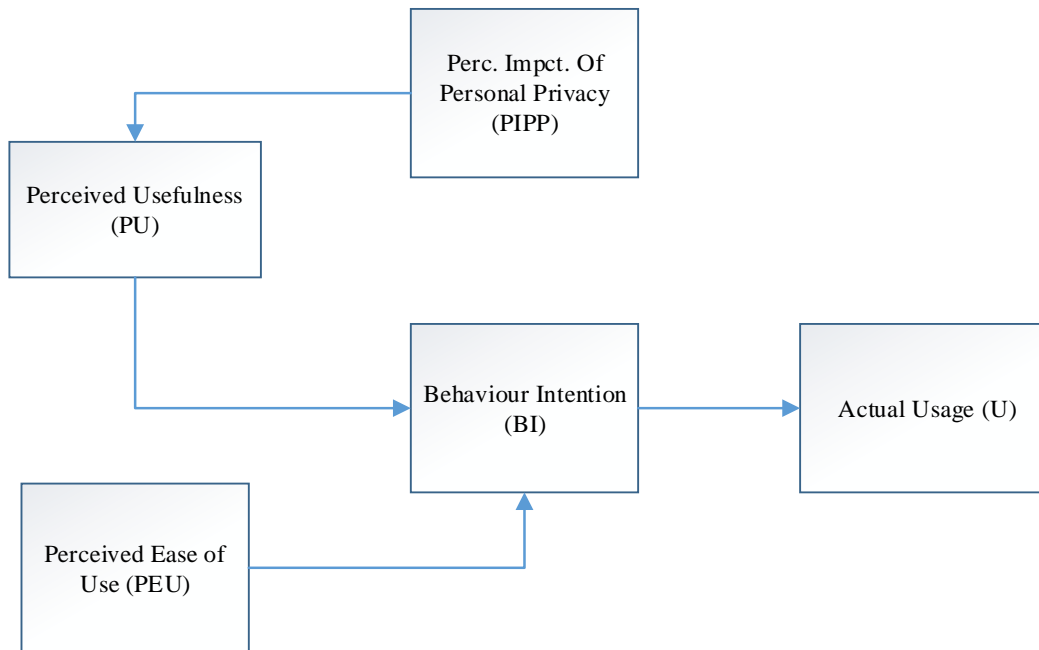
Also, the results show the behavior intention influences directly the actual usage, supporting H1d. There is a statistically significant relationship between behaviour intention and actual usage of mobile phone technology in SMEs. This implies that, as employees feel intending to use a mobile phone in performing their SME obligations, they will actually use it.

IMPACT OF PERSONAL PRIVACY

This study also assessed the whether the privacy of employees of SMEs is among the important factor on their intention to use in the future. The hypothesis was that the loss of personal privacy can influence an employee's intention to use a mobile technology. Previously, Tassabehji (2008) tested and found a significant relationship between intention to use technology and personal privacy concerns in a big multinational company.

This study has not identified any statistically significant relationship in these two factors in the SMEs perspective. The hypothesis H2c hypothesis was rejected. This shows that is existing differences between SMEs and big organisations when it comes to the culture of using mobile phone technology. This study explains this discrepancy in terms of sense of ownership because in SMEs there a high degree of autonomy such that their big portion of employees are personally attached to these firms. That personal attachment might be the result of less impact of perceived privacy on the intention to use mobile phones because they tend to be less affected by being contacted on the weekends or overnights. Employees are working by involving their mobile phones which they also use at home. The concern in this study is on the impact of personal privacy towards perception on the usefulness of mobile phones. That is, if employees are assured with personal privacy, they will likely to perceive mobile phones to be useful to them. The result of this study supports this hypothesis. The hypothesis H2a was supported. That means, there is no significant relationship between privacy and usefulness of mobile phone technology in Tanzanian tourism SMEs.

These results are in line with the context of a single multinational company in which mobile technology usefulness by employees was found to be impacted by the extent to which their personal privacy is compromised (Tassabehji et al., 2008). Therefore, if managers need their employee to realise the importance of mobile phone technology at workplaces, they need their personal privacy to be respected accordingly. Therefore, based on the findings of this study, a resulting extended TAM model which has a privacy component is seen in Figure 3.

Figure 3: An evaluated Extended TAM

An evaluated theoretical model is a TAM which explains both fundamental factors and an added component of personal privacy. It is useful for managers and stakeholders in identifying the key issues to consider if they need mobile phones to be used to its fullest. Therefore, an employee's privacy has been identified to be among the key influencing factors to the perceived usefulness of mobile phones in the SMEs. With this study, managers and SME owners should consider that employee need to have their personal time even if they can still be accessed through their mobile phones at any time anywhere.

CONCLUSION

This study aimed at assessing whether personal privacy is important for acceptance of mobile phone technology by employees of SMEs. This was important because of the key role mobile phone technology plays in less developed countries, especially in small businesses. A factor representing perceived personal privacy was constructed from literature and tested by adding it to the TAM before testing a theoretical model to the Tanzanian SMEs through a survey. The results have shown

that perceived personal privacy is among the key influencing factors to the perceived usefulness of mobile phones in the SMEs. This implies that their employees should be respected for their free time even if they normally stay close to their mobile phones. Since the impact is towards the perceived usefulness of the technology, the employees are likely not to recognize the importance of involving their mobile phones at work if their bosses do not respect their free personal time. The main limitation of this study was on the fact that the sample was only specific to the SMEs which belongs to the service industry. Therefore, the future studies could focus on the individuals working in SMEs from other sectors or rather large companies as they use mobile phone technologies when performing their duties.

REFERENCES

- Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behavior and Human Decision Processes* 50, 179–211.
- Arnold, M. (2003). On the phenomenology of technology: the “Janus-faces” of mobile phones. *Information and Organization* 13, 231–256.
- Avram, D.O., and Kühne, S. (2008). Implementing responsible business behaviour from a strategic management perspective: Developing a framework for Austrian SMEs. *Journal of Business Ethics* 82, 463–475.
- Awang, Z. (2015). SEM made simple: A gentle approach to learning Structural Equation Modeling (MPWS Rich Publication).
- Baraldi, A.N., and Enders, C.K. (2010). An introduction to modern missing data analyses. *Journal of School Psychology* 48, 5–37.
- van Biljon, J., and Kotzé, P. (2007). Modelling the Factors That Influence Mobile Phone Adoption. In *Proceedings of the 2007 Annual Research Conference of the South African Institute of Computer Scientists and Information Technologists on IT Research in Developing Countries*, (New York, NY, USA: ACM), pp. 152–161.
- Byomire, G., and Maiga, G. (2015). A model for mobile phone adoption in maternal healthcare. In *IST-Africa Conference, 2015*, (IEEE), pp. 1–8.

- Chen, J.V., Yen, D.C., and Chen, K. (2009). The acceptance and diffusion of the innovative smartphone use: A case study of a delivery service company in logistics. *Information & Management* 46, 241–248.
- Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process* (Sage).
- Davis, F.D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly* 319–340.
- Gallego, M.D., Luna, P., and Bueno, S. (2008). User acceptance model of open source software. *Computers in Human Behavior* 24, 2199–2216.
- Gribbins, M., Shaw, M., and Gebauer, J. (2003). An investigation into employees' acceptance of integrating mobile commerce into organizational processes. *AMCIS 2003 Proceedings* 11.
- Hair, J., Black, W., Babin, B., Anderson, R., and Tatham, R. (2006). *Multivariate data analysis (Multivariate Data Analysis Upper Saddle River, New Jersey, Prentice Hall.)*.
- Hair, J.F., Wolfinbarger, M.F., Ortinau, D.J., and Bush, R.P. (2008). *Essentials of marketing research (McGraw-Hill/Higher Education)*.
- Huber, E., and Stephens, J.D. (1993). Political parties and public pensions: a quantitative analysis. *Acta Sociologica* 36, 309–325.
- Jarvenpaa, S.L., and Lang, K.R. (2005). Managing the Paradoxes of Mobile Technology. *Information Systems Management* 22.
- Kiriş, C.Ş.-H.K., and Kiriş, P.T.-H.M. (2008). Can SMEs in developing countries resist crisis? An analysis on Turkish and Albanian cases. In *First International Conference on Balkans Studies (ICBS 2008) INTEGRATION OF THE WESTERN BALKANS INTO EURO-ATLANTIC STRUCTURES-FUTURE CHALLENGES*, p. 208.
- Kwon, H.S., and Chidambaram, L. (2000). A test of the technology acceptance model: The case of cellular telephone adoption. In *System Sciences, 2000. Proceedings of the 33rd Annual Hawaii International Conference On, (IEEE)*, pp. 7–pp.

- Lindsay, R., Jackson, T.W., and Cooke, L. (2011). Adapted technology acceptance model for mobile policing. *Journal of Systems and Information Technology* 13, 389–407.
- Migiro, S.O. (2006). Diffusion of ICTs and E-commerce adoption in manufacturing SMEs in Kenya : research article.
- Mutula, M, S., and Van Brakel, P, P. (2006). E-readiness of SMEs in the ICT sector in Botswana with respect to information access. *The Electronic Library* 24, 402–417.
- Ng-Kruelle, G., Swatman, P.A., Rebne, D.S., and Hampe, J.F. (2002). The price of convenience: Privacy and mobile commerce. *Quarterly Journal of Electronic Commerce* 3, 273–286.
- OECD (2004). *Measuring the information economy*.
- Peng, R., Xiong, L., and Yang, Z. (2012). Exploring Tourist Adoption of Tourism Mobile Payment: An Empirical Analysis.
- Polit, D.F., and Beck, C.T. (2006). The content validity index: are you sure you know what’s being reported? Critique and recommendations. *Research in Nursing & Health* 29, 489–497.
- Prieto, J.C.S., Migueláñez, S.O., and García-Peñalvo, F.J. (2015). Mobile acceptance among pre-service teachers: a descriptive study using a TAM-based model. In *Proceedings of the 3rd International Conference on Technological Ecosystems for Enhancing Multiculturality*, (ACM), pp. 131–137.
- Rumanyika, J.D. (2015). *Obstacles TOWARDS ADOPTION OF MOBILE BANKING IN TANZANIA: A Review*.
- Rumanyika, J.D., and Mashenene, R.G. (2014). *IMPEDIMENTS OF E-COMMERCE ADOPTION AMONG SMALL AND MEDIUM ENTERPRISES IN TANZANIA: A REVIEW*.
- Ruuska-Kalliokulju, S., Schneider-Hufschmidt, M., Väänänen-Vainio-Mattila, K., and Von Noman, B. (2001). Shaping the Future of Mobile Devices. Results of the Workshop on Future Mobile Device User Interfaces at CHI 2000. *SIGCHI Bulletin* 33, 16–21.

- Sarker, S., and Wells, J.D. (2003). Understanding mobile handheld device use and adoption. *Communications of the ACM* 46, 35–40.
- SIDO (2002). SMALL INDUSTRIES DEVELOPMENT ORGANISATION IN TANZANIA.
- SME Policy (2013). Tanzania SMEs Policy Review After 10 years.
- Sun, Y., Wang, N., Guo, X., and Peng, Z. (2013). Understanding the acceptance of mobile health services: a comparison and integration of alternative models. *Journal of Electronic Commerce Research* 14, 183.
- Taherdoost, H. (2018). A review of technology acceptance and adoption models and theories.
- Tassabehji, R., Wallace, J., and Srivastava, A. (2008). Corporate Acceptance of M-Technology in the Service Sector: A Case Study. *AMCIS 2008 Proceedings* 208.
- van Biljon, J., and Kotzé, P. (2007). Modelling the Factors That Influence Mobile Phone Adoption. In *Proceedings of the 2007 Annual Research Conference of the South African Institute of Computer Scientists and Information Technologists on IT Research in Developing Countries*, (New York, NY, USA: ACM), pp. 152–161.
- Venkatesh, V., and Davis, F.D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science* 46, 186–204.
- Venkatesh, V., Morris, M.G., Davis, G.B., and Davis, F.D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly* 425–478.
- Yueh, H.-P., Lu, M.-H., and Lin, W. (2015). Employees' acceptance of mobile technology in a workplace: An empirical study using SEM and fsQCA. *Journal of Business Research*.