The Influence of Organizational Culture on the Adoption of ICT Innovation following Technological Disruption: Evidence from Kenyan ICT SMEs

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ABSTRACT

Disruptive ICT technologies such as artificial intelligence, machine learning and mobile computing are transforming how organizations communicate, connect and discover. As a result, firms are being forced to restructure their strategies in order to survive in the market. Despite developing new strategies, an existent challenge facing the adoption of ICT innovation lies in the redesign of the human activity systems in which the technology is embedded and as such, necessitating an evolution of employee behaviour to facilitate adoption. In this study, it is aimed to investigate the influence of organizational culture on employee behaviour towards the adoption of ICT innovation. The study adopts a positivist philosophy where a survey of 83 managers and 43 employees drawn from 100 ICT Kenyan SMEs is conducted. Data collected is analysed using regression and correlation techniques. The findings from the study revealed that employee behaviour facilitating the adoption of ICT innovation were fostered by organizational cultures that adopted adhocracy practices such as having informal manager-employee relationships and emphasizing on creating customer value. Additionally, organizational culture dimensions such as control, social control and customer orientation were linked to high ICT adoption rates. In the wake of technological disruption, it would be recommended for tech SMEs to foster organization culture climates that facilitate employee behaviour favouring ICT adoption. Consequently, this implies that they structure their policies to enable their employees to trust in new technologies, foster personal incentives in experimenting with the technology, develop a perceived usefulness of the technology and perceived ease of use from using the technology.

Key Words: Disruptive technology, Adoption, Kenyan SMEs, Organization Culture.

1. INTRODUCTION

Christensen (1997) describes disruptive innovation as that which begins at the market's bottom but moves up relentlessly and in effect, displaces already established technology or sets up entirely new industries. Examples of such innovation range from cellular phones that disrupted the fixed telephone lines to the personal computers that displaced mini and mainframes [1]. The author further argues that such innovation diffuses in a non-linear fashion, with adoption occurring at immensely high rates, sometimes overnight, in contrast to [2] view of linear diffusion where few people begin by adopting the technology, then more until the technology is ubiquitous in nature.

Over the years, different researchers have explored the impact of disruptive technology in business. [3] provided evidence of its impact on the success of South African SMEs while [4] demonstrated the impact of disruptive cloud computing on the development, distribution and implementation of enterprise software on the business ecosystem. [5], on the other hand, revealed the impact of disruptive additive manufacturing technology on the location of international businesses. In the Kenyan economy, disruptive technologies such as mobile money (M-PESA), e-commerce and ride-sharing applications such as Uber have been

observed to displace currently existent industries. As a result, already established organisations have been forced to redesign their strategies in order to survive in the market. For instance, local banking institutions such as Kenya Commercial Bank (KCB) and Commercial Bank of Africa (CBA) have resorted to partner with the mobile money platform (M-PESA) while numerous taxi companies such as Little Cab, Mondo and Taxify have adopted the ride-sharing technology.

Organizational culture uniquely distinguishes one firm from another thereby leading to numerous studies on its impact on employee behaviour and work performance. Studies undertaken reveal its influence on employee effectiveness [6], individual willingness to adopt innovation [7] innovative behaviour [8] and job satisfaction [9]. Similarly, organizational culture studies have revealed important culture dimensions that have a direct influence on ICT adoption such as top management support [10] and exposure to external environments [11]. [12] argue that the adoption of any technology often necessitates a redesign of the human activity systems in which the technology is embedded.

As such, despite redesigning business strategy to facilitate the adoption of disruptive technology, a challenge still arises in enabling employees to adopt the given technology. Consequently, the current study aims to examine the influence of organizational on employee behaviour towards adoption of ICT innovation in order to leverage on the technology. The significance of the study is to provide important insight to SMEs on key organizational culture dimensions that have a direct impact on the adoption of disruptive ICT innovation.

2. LITERATURE REVIEW

2.1 Organization Culture

Deal and Kennedy (2002) provide a simplistic definition of organization culture by describing it as how things get done in an organization. However, numerous studies reference [13] who describes it as a system of shared assumptions learned by a given social group to solve its problems of external adaptation and internal integration, which has worked well enough to be considered valid, and thus is taught to new members as the correct way to think, perceive and feel in relation to the given problems.

Schein (2010) further classifies organization culture into three main levels: artifacts; espoused values; and basic underlying assumptions[fig.1]. Artifacts are described as visual organizational structures and processes that are easily seen and heard, for instance, physical space architecture, artistic production and overt employee behaviour. Espoused values on the other hand, are described as strategies, goals and justifications that convict employees to face reality in a given manner while basic assumptions are considered as the learned responses to a group's problems of survival in the external environment and internal integration problems.
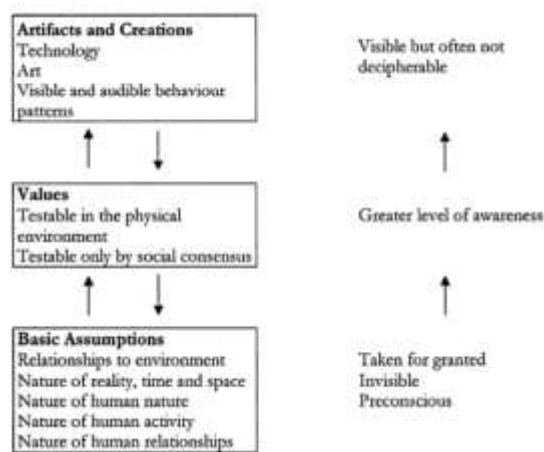

Figure1. Levels of organization culture [13]

Over the years, different researchers have revealed an existent link between organization culture and employee behaviour. [6] revealed a direct influence of organization culture on employee performance and job satisfaction across different organizational sectors. [8] on the other hand, showed that leaders in an organisation influenced employee innovative behaviour through either deliberate actions when stimulating the idea generation process, or through the general, daily behaviour. In a different study, [14] investigated the influence of organization culture on the trust levels between managers and employees in technical organizations and in effect, revealed that employee-manager trust levels increased as perceived cultures became more organic. [15] further argued that the level of control in the organisation had a direct influence on the trust employees had towards managers. As such, the author highlighted that higher commitment levels were observed where employees were given control over their work integrity and quality.

Suppiah and Singh Sandhu (2011) further highlighted the influence of organization culture on employee tacit knowledge sharing behavior. Their study would reveal that both positive and negative tacit knowledge sharing behaviour was the direct result of organization culture. The finding is significant in the current study since the adoption of technology, in part, relies on the sharing of tacit knowledge between employees. [16] Additionally revealed the influence of culture on employee commitment levels and as a result, its overall performance. [17] Argues that organizational culture has been linked to the failure in the implementation of innovation in different organisations. The author argues that how leaders choose to communicate on the implementation of innovation eventually influences its success in the organization. As such, [17] emphasizes on the impact of top managerial attitudes towards risk and innovation in an enterprise.

Additionally, separate studies have revealed further influences of organization culture on the adoption of ICT. For instance, [7] revealed a positive association between the individual perception of organisation culture and the individual willingness to adopt technology among public organizations. Their study was significant in that it highlighted the influence of behavioral intent in facilitating technological adoption. [18], on the other hand, revealed that organisations that fostered adhocracy cultures demonstrated a positive correlation towards e-commerce adoption while those that were structured in a hierarchical manner demonstrated a negative correlation. A different study by [19] revealed that organisation culture had a significant influence in the development of absorptive capacity in enabling hospitals embrace new technological innovations. Absorptive capacity being defined as the ability of organizations to recognize the value of new information, assimilate it and use it productively, was observed to be highly influenced by the culture fostered by hospitals.

On the other hand, it was observed that among Vietnamese and Polish migrants in Australia, culture had a significant influence on how they adopted highly innovative technology products [20]. The two studies reveal that organisation culture had a significant influence on individual perceptions and thus, willingness to adopt technology. A study by [21] on the adoption of Software as a Service (SaaS) among Indonesian firms revealed that organizational factors such as top management support had a significant influence on the success of the given adoption. [22] in a different study exploring factors affecting adoption of C-Commerce in Malaysia, revealed that information sharing culture had the highest influence in the adoption of c-commerce followed by factors such as external environment and readiness of the organization. The influence of organization culture in decision making was similarly seen to have the highest influence on adoption of technology in Greek banks [23].

Consequently, the study seeks to test the following hypothesis:

H1: There is a relationship between the culture adopted by an organization and employee behaviour.

2.2 Evolution of Disruptive Technological Innovation

Christiansen, Turkina and Williams (2013) describe technological disruption as the packaging of existing technology in a new format that has more implications for business to business (B2B) transactions. In addition, the authors point out that apart from technological disruption, there also exists commercial disruption which focuses on the consumer market. With the latter, a new product integrated from existing or new technologies is developed and taken to the customer market.

[24] highlights two major characteristics of disruptive innovation. First, the author notes that the innovation diffuses in a rather non-linear manner with adoption occurring at immensely high rates and second, disruptive innovation is not new, that is, it has been in existence for decades in different sectors. [25] highlights the Gutenberg printing press as one of the major innovative technologies that displaced hand-written manuscripts produced by monks. [26] further highlights the disruption of the ice houses brought about by the refrigerator while [27] notes the phonograph's sound recording ability on the disruption of live music.

[28] notes that in the current age, the disruptive innovation taking place is driven by ICT rather than mechanical engineering. The author cites numerous tech-driven disruptions ranging from the ride-sharing applications such as Uber to the mobile money M-PESA in Kenya that have disrupted the taxi industry and banking industries respectively. A third innovation also cited is e-commerce which has been upsetting traditional brick and mortar stores. Such innovation has been widely adopted in the Kenyan economy.

2.3 Adoption of disruptive ICT innovation in Kenyan SMEs

Several case studies reveal the impact of disruptive ICT innovation in the Kenyan economy. Most notable is the mobile money (M-PESA) innovation launched in 2007 by Safaricom, Kenya's largest telecom. [29] notes that since the launch of M-Pesa in 2007, the service has so far attained 30 million users in 10 countries. Further, in 2016 alone, the system processed about 6 billion transactions at a peak rate of 529 transactions per second. [30] adds that the innovation has enabled women-led households to alleviate themselves from poverty by enabling them to change their occupations from subsistence farming to business oriented enterprises.

Ndemo (2017) notes a second technological innovation that has been widely adopted is the Ushahidi mobile app. [31] notes that Ushahidi which translates to testimony in English, is an interactive mapping tool that is employed in crisis situations that humanitarian workers can use to help them get assistance. Further, the author notes that despite the solution being used initially as a web solution that helped journalists map reports of violence after the 2008 Kenyan post election violence, it has since developed into a non-profit technology company that specializes in free and open source software for collection of information, visualization and information mapping. Currently, the innovation has been adopted across continents such as in rescuing survivors of the Haiti earthquake, floods in Pakistan and in crowd mapping plot tube strikes in London. A third innovation, that has e-commerce, has also transformed the business environment. [32] notes that with the entry of Jumia, other e-commerce competitors have since emerged as they rival the giant. Further, diversified businesses have as well adopted e-commerce ranging from electronic supplies to property and clothing.

The study, as a result, formulates the following hypotheses:

H_2: There is a relationship between employee behaviour and the adoption of ICT innovation.

H_3: There is a relationship between organisation culture and the adoption of ICT innovation.

2.4 Conceptual Framework

In order to evaluate the variables of interest in the study, organizational culture, employee behaviour, and ICT adoption, a conceptual framework was developed. The framework comprised of Hofstede's Multi-focus model to evaluate organization culture and a model to assess employee behaviour towards ICT adoption.

Hofstede's Multi-focus model

According to [33], organization culture can be dimensionalized into six categories. The first relates to the effectiveness of the organization in terms of how and what gets done. As such, effectiveness is categorized into means and goal oriented cultures where with the former, organizations focus on how work gets done while with the latter, the focus is on the actual work delivered. The second dimension pertains to customer orientation where internally driven cultures have employees focusing on taking initiatives and acting according to what is best for their customers while externally driven cultures have employees focusing on delivering customer requests.

The third relates to aspects of control where easy going cultures have an informal and more structurally loose approach to work while strict disciplined cultures have a more structured approach to work that involves planning and strictness. The fourth relates to social control where in a local culture, employees identify easily with their leaders as teammates while in a professional culture, such identification is on a more professional and work related manner [33]. The fifth, approachability, regards aspects of the ease with which new members join the organization. In open cultures, new employees are welcomed to the organization easily while in closed cultures, they have to prove themselves through their work before they can be accepted. Sixth, management philosophy, regards the level of concern given to employees' vis a vis performance at work. In employee-centred cultures, leaders take priority over their employees' well-being while in work-centred cultures, priority is given to high task performance [33]. Table 1 below shows the different dimensions of organization culture.

Table 1. Hofstede's Multi-focus model [33]

Construct	Application
Effectiveness	Means vs goal oriented cultures
Customer Orientation	Internal vs external drive
Control	Easy going vs tight control
Social Control	Local vs professional identity
Approachability	Open vs closed systems
Management Philosophy	Employee concerns vs work completion

Several reasons were advanced for the use of the multi-focus model. First, it clearly categorized organizational culture into six dimensions that would be easily measured empirically. Second, the model has been extensively used in dimensionalizing organizational cultures in the Netherlands [33]. The author cites its use in toy manufacturing companies and municipal corporations. Numerous studies demonstrate that organisation culture influences the behaviour of employees particularly their

work performance, engagement and commitment at the workplace. Consequently, based on this finding, the framework theorizes that organisation culture directly influences employee attitudes and behaviour and their intention to use ICT innovation (new technologies).

The framework hypothesizes that a relationship exists between organisation culture and employee behaviour as well as that between employee behaviour and their adoption of ICT innovation. Finally, it theorizes that a relationship exists between organisation culture and adoption of ICT innovation. The study assesses the organization culture dimensions from dimensions of organisation culture on one end to their influence on developing behaviour and attitudes on the other. Similarly, it seeks a correlation between these organization culture dimensions to the adoption of ICT [34] as well as the correlation between behaviour developed as a result of organization culture and adoption of ICT. Table 2 below summarizes the constructs of the employee behaviour model.

Table 2. Constructs of employee behavior model [34]

Construct	Application
Trust	Belief that technologies do not pose threats to the organization
Personal Incentives	Willingness to experiment with new technologies
Perceived Usefulness	Extent to which employees believe that new technologies enhance their work
Ease of Use	Extent to which employees believe that using new technologies is free from effort
Intention to use	Likelihood to engage in the new technologies
Frequency of use	How frequently new technologies are used

Consequently, the conceptual framework illustrated in figure 2 below was developed by combining aspects of Hofstede's model and the employee behaviour model.
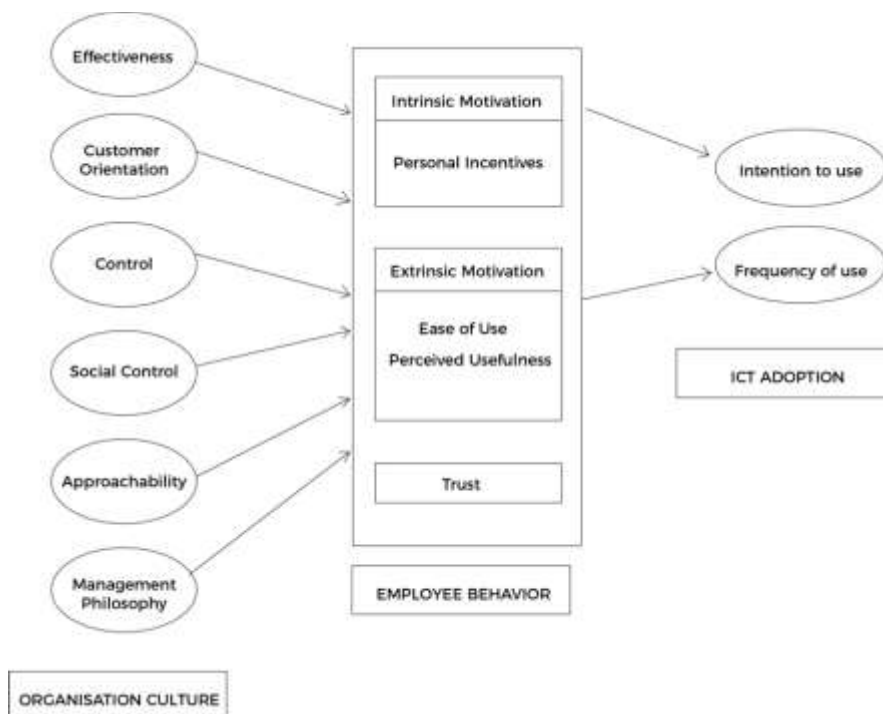
Figure 2. Conceptual framework

3. METHODOLOGY

The aim of the research was to investigate the influence of organization culture on the behaviour developed by employees in SMEs towards the adoption of ICT innovation. As such, it targeted on identifying the influence of different organization culture dimensions on the different employee behaviour that facilitated adoption of ICT innovation. A positivist research philosophy was

adopted since the study sought to investigate relationships between components in the phenomena using a scientific approach without interfering with it. Similarly, the study followed a deductive approach as it aimed to explain the causal relationships between the study variables, organization culture and adoption of ICT innovation. Further, several hypotheses were formulated to be tested through data collection and analysis. Simple random sampling technique was selected to generate the study population which comprised of SMEs that rely on ICT to drive their business. The study focused on such businesses given their rapid response to changes in their environments thereby ensuring validity and reliability of the results. Online questionnaires were sent via Google Forms due to the efficiency and relatively cheap cost over geographically distributed areas. Additionally, questionnaire use was motivated by their anonymity and lack of bias. The questionnaires were structured into three key sections: personal details; organizational culture dimensions and ICT adoption based on the study's conceptual framework.

4. RESEARCH FINDINGS

At the onset, the study targeted 150 different employees drawn from 100 ICT based SMEs. However, only 128 individuals responded to the administered questionnaires leading to an 84.67% response rate. 2 responses had been partially filled thereby being deleted from the samples, reducing the total responses to 126, an 84% response rate. The demographic profile of the respondents is summarized in table 3 below.

Table 3. Demographic of respondents

Demographic Characteristics		Frequency	Percentage
Gender	Male	109	86.5%
	Female	17	13.5%
	18 – 30	70	55.6%
	31 – 40	43	34.1%
Age	41 – 50	9	7.1%
	50+	4	3.2%
	Less than 1 year	3	2.4%
	1 – 5 years	61	48.4%
Years in ICT	6 – 10 years	41	32.5%
	10+ years	21	16.7%
Role in organization	Manager	83	65.9%
	Employee	43	34.1%

From the results, it was observed that most of the participants were aged between 18 and 40 years. 86.5% of them were male while 13.5% were female. 65.9% served as managers while 34.1% were employees. 49.2% had worked in the ICT industry for more than 6 years while 50.8% had been in the industry for less than 5 years.

In addition, Shapiro Wilks (S-W) test for normality was conducted for the collected data due to the small sample size (n=126) [35]. The authors further note that with the test, the null hypothesis posits that the data is drawn from a normally distributed population while the alternative hypothesis posits that the population is not normally distributed. [36] further notes that the rule of thumb used in determining normality is that where the statistic p values are greater than 0.05, the dataset is not normally distributed whereas p values less than 0.05 implies that the dataset is normally distributed. The results of the test are summarized in the tables below.

The results in table 4 below revealed that the organization culture response data was not normally distributed given that p>0.05 in all instances.

Table 4. Shapiro Wilks results for organization culture

Organization Culture	Shapiro Wilks		
	Statistic	df	sig
Effectiveness	0.885	126	0.000
Customer orientation	0.707	126	0.000
Control	0.871	126	0.000
Social Control	0.835	126	0.000
Approachability	0.874	126	0.000
Management Philosophy	0.911	126	0.000

The results in table 5 below also revealed that employee behaviour data was not normally distributed given that p>0.05 in all instances.

Table 5. Shapiro Wilks results for employee behaviour

Employee Behaviour	Shapiro Wilks		
	Statistic	df	sig
Personal Incentives	0.825	126	0.000
Trust	0.849	126	0.000
Perceived Usefulness	0.797	126	0.000
Ease of use	0.885	126	0.000

Finally, the results in table 6 revealed that ICT adoption data was not normally distributed given that p>0.05 in all instances.

Table 6. Shapiro Wilks results for ICT adoption

ICT Adoption	Shapiro Wilks		
	Statistic	df	sig
Effectiveness	0.761	126	0.000
Customer orientation	0.798	126	0.000

Next, the correlation between the different variables was sought using Spearman Rank Correlation. A reason for its selection over Pearson's correlation was that the population was not normally distributed [37]. According to [37] a similar rule of thumb to Pearson's correlation is used in interpreting Spearman's rank correlation. As such, the strength of the correlation coefficient ranges from -1 to +1 with the former indicating a strong negative relationship and the latter indicating a strong positive relationship. Further, p values less than 0.05 indicate that the relationship between the variables is not statistically significant while values greater than 0.05 indicates that the relationship between variables is statistically significant [37]. Table 7 below summarizes the correlation results between organization culture and employee behaviour.

Table 7. Correlation between organization culture and employee behaviour

Organization Culture	Employee Behaviour							
	Personal Incentives	Sig	Trust	Sig	Perceived Usefulness	Sig	Ease of Use	Sig
Effectiveness	-0.073	0.418	-0.079	0.379	-0.052	0.560	-0.136	0.129
Customer orientation	0.205	0.021	0.094	0.296	0.096	0.283	0.088	0.327
Control	0.165	0.064	0.310	0.000	0.135	0.130	0.239	0.007
Social Control	0.278	0.002	0.314	0.000	0.287	0.001	0.221	0.013
Approachability	0.069	0.440	0.025	0.785	0.126	0.158	-0.074	0.411
Management Philosophy	0.268	0.002	0.059	0.509	0.038	0.669	0.014	0.873

From the results collected in table 7 above, it was observed that customer orientation ($rs = 0.205$, p=0.021), social control ($rs = 0.278$, p=0.002), and management philosophy ($rs = 0.268$, p=0.002) dimensions of organization culture had a moderate impact on personal incentives behavior given that the coefficients ranged between 0.205 to 0.278. further, since it was also observed that $p<0.05$ in all cases, it was concluded that a statistically significant relationship existed between personal incentives and the three variables.

Secondly, it was observed that control ($rs = 0.310$, $p<0.001$) and social control ($rs = 0.314$, $p<0.001$) organization culture dimensions had an influence on trust. The correlation coefficients implied a strong relationship with trust behavior while p vales less than 0.05 implied that the relationship was statistically significant. Only social control ($rs = 0.287$, p=0.001) was seen to influence perceived usefulness while control ($rs = 0.239$, p=0.007) and social control ($rs = 0.221$, p=0.013) were seen to influence ease of use perception. The strength of the coefficients implied that a moderate relationship existed between the variables while p values <0.05 implied that the relationships were statistically significant.

Next, correlation was sought between employee behaviour and ICT adoption. Table 8 below summarizes the results obtained.

Table 8. Correlation of employee behaviour and ICT adoption

Employee Behaviour	ICT Adoption			
	Intention to use	Sig	Frequency of use	Sig
Personal Incentives	0.368	0.000	0.397	0.000
Trust	0.390	0.000	0.410	0.000
Perceived Usefulness	0.330	0.000	0.310	0.000
Ease of use	0.406	0.000	0.259	0.003

The results in table 8 above illustrated that each employee behaviour had a significant impact on both the intention to use and frequency of use given that $p<0.05$ in all cases. Further, based on the strength of the c-efficient, it was observed that ease of use had the highest impact on intention to use ($rs = 0.406$, $p<0.001$) based on the strength of the coefficient while trust had the highest influence on frequency of use ($rs = 0.410$, $p<0.001$).

Finally, the correlation between organization culture and ICT adoption was investigated. Table 9 summarizes the results obtained.

Table 9. Correlation of organization culture and ICT adoption

Organization culture	ICT Adoption			
	Intention to use	Sig	Frequency of use	Sig
Effectiveness	-0.078	0.388	-0.013	0.889
Customer orientation	0.243	0.006	0.08	0.371
Control	0.203	0.022	0.025	0.780
Social Control	0.289	0.001	0.220	0.013
Approachability	0.067	0.454	0.039	0.661

From the results in table 9, it was observed that there was a significant relationship between intention of use and organization culture dimensions, customer orientation (rs = 0.243, p=0.006), control (rs = 0.203, p=0.022), and social control (rs = 0.289, p=0.001). Similarly, it was noted that a relationship existed between social control (rs = 0.220, p=0.013) and frequency of use. Based on the range of coefficients (0.203 to 0.289), it was concluded that a weak to moderate relationship existed between the variables.

5. DISCUSSION AND CONCLUSION

5.1 Influence of organization culture on employee behaviour

The first objective in the study was to investigate the influence of organization culture dimensions on employee behaviour. The results obtained showed that personal incentives behaviour was moderately influenced by dimensions such as customer orientation, social control and management philosophy where social control had the highest influence while customer orientation had the least. The implication was that individual willingness to experiment with ICT innovations increased where employees regarded leaders as teammates and where their well being was emphasized.

The finding reiterated [8] who revealed that leaders influenced the innovative behaviour of their employees and [15] who argued that the control levels in an organization directly influenced employee actions. As employees informally interacted with their leaders and leaders in return, were concerned with their wellbeing, their willingness to interact with new technologies improved. The finding reiterated [16] who revealed that employee commitment levels would be a direct result of their perception of their organization culture. On the contrary, the result that customer orientation had the least influence on personal incentives was a deviation from previous work by [38] who noted that the adoption of e-commerce was motivated by increasing customer perceived value. As such, it would be expected that customer orientation would have a similar impact on personal incentives as customer value was sought.

Control was observed to have a strong influence on trust with 58.8% of employees agreeing that their organizations had an easy going culture thereby having an informal approach to work and were structured loosely. Similar findings were reported by [14] who revealed that employee-manager trust levels increased as perceived cultures became more organic. Further, it was observed that the social control had a strong influence on trust behaviour with 61.9% of respondents agreeing that they related with their leaders as teammates rather than on professional and work related terms. As such, this implied that regarding leaders as teammates led to a significant impact on the employee-manager trust relationships in the organizations. A similar finding had been highlighted by [15] who revealed that the level of control in the organisation had a direct influence on the trust employees held towards their managers.

Only social control had a statistically significant relationship with perceived usefulness behaviour thereby implying that the usefulness perception towards new technologies improved where leaders related with employees as teammates. [17] reported similar findings by highlighting the role of leaders in the innovative behaviour of employees. Finally, it was also observed that social control and control were seen to influence ease of use perception by employees towards new technologies. 61.9% of respondents agreed that they related with their leaders as teammates rater than on professional and work related terms while 58.8% of employees agreed that their organizations had an easy going culture thereby having an informal approach to work and were structured loosely. The finding implied that organizations that had easy going cultures and had employees relate with leaders as teammates eventually improved perceptions towards ease of use of the new technologies.

5.2 Influence of employee behaviour on ICT adoption

A second objective in the study was to identify the influence of employee behaviour on ICT adoption. Results showed that ease of use behaviour had the highest influence on intention to use and as a result, implied that organizations whose prevailing culture fostered beliefs that the usage of new technologies was free from effort recorded higher adoption rates. A similar finding had been

observed by [17] who argued that top managerial actions either supported or discouraged innovation implementation. However, perceived usefulness was observed to have the least influence on intention to use, a finding that was contrary to studies conducted on IS adoption that cited it as a major factor [39]; [40].

The deviation was argued to arise from the small sample size. Trust was observed to have a significant influence on intention of use which meant that as trust relationship with new technologies and among employees improved, higher adoption rates would result. The finding reiterated [41] who demonstrated that service quality and trust on the technology itself were major influencers of the willingness of e-governments adoption. [42] had similarly revealed the influence of trust in technology on the adoption of on-line tax services in Taiwan.

With frequency of use, trust behaviour demonstrated the highest impact on adoption of ICT innovation where 84.3% of respondents agreed to using new technologies very often. This meant that as employees increased their trust levels on new technologies, higher usage frequencies would result. The result was a deviation from studies on the adoption of IS [39]; [40] which highlight ease of use and perceived usefulness as the main factors influencing adoption. Personal incentives also demonstrated significant influence on frequency of use with 84.3% of respondents agreeing to using new technologies very often. The result showed that where personal incentives were encouraged in organizations, higher frequency of usage with new technologies followed as a result. The finding reiterated [8] who revealed that employee innovative behaviour such as experimenting with new technologies was significantly influenced by the leadership prevalent in the organization. Similarly, the finding would reiterate [16] who revealed that employee commitment levels would be a direct result of their perception of their organization culture. As such, as employee commitment levels increased towards their organizations, personal incentives would increase as well. Perceived usefulness also demonstrated significant influence on frequency of use hence leading to the conclusion that higher frequency of usage would result following the perception that new technologies were useful in daily work processes. The finding reiterated [19] who revealed that hospitals tended to embrace new innovations as they deemed them useful.

5.3 Influence of organization culture on ICT adoption

The final objective of the study was to evaluate the influence of organization culture on ICT adoption. The results revealed a significant relationship existent between customer orientation and intention of use where 86.5% of respondents agreed that their organizations had been structured to attend to customer needs. As such, the likelihood to engage in new technologies was directly influenced by the organization's plan to meet customer needs. Consequently, it would be argued that tech SMEs in Kenya would adopt new technologies provided they helped them meet their customer needs. The finding reiterated [19] who revealed that organization culture had a significant influence in the development of absorptive capacity in enabling hospitals embrace new technological innovations. Pires & Aisbett (2003) identified similar findings whereby they noted that the adoption of e-commerce was motivated by increasing customer perceived value.

Intention of use was also significantly influenced by control in organizations where 58.8% of employees agreed that their organizations had an easy going culture thereby having an informal approach to work and were structured loosely. The results implied that easy going cultures improved adoption rates of new technologies among Kenyan tech SMEs. The finding reiterated [18] who revealed that organisations that fostered adhocracy cultures demonstrated a positive correlation towards e-commerce adoption while those that were structured in a hierarchical manner demonstrated a negative correlation. Similar findings had been obtained by [17] who highlighted that how leaders chose to communicate on the implementation of innovation eventually influenced its success in the organization. As such, it would be argued that organizations that fostered adhocracy cultures eventually had high adoption rates of ICT innovations due to the easy going culture evident in the organization. Intention of use was also significantly influenced by social control in organizations where the implication was that the relation between employees and managers had a significant influence on the likelihood of using new technologies where informal employee-manager relations would lead to higher adoption rates while work related relationships between leaders and employees would hamper adoption of ICT innovations. The finding would reiterate [21] who revealed that with the adoption of Software as a Service (SaaS) among Indonesian firms, organizational factors such as top management support had a significant influence on the success of the given implementation.

In the wake of technological disruption, it would be recommended for tech SMEs to foster organization culture that facilitates employee behaviour that favors ICT adoption. Consequently, this implies that they structure their policies to foster employee behaviour of trust, personal incentives, perceived usefulness and perceived ease of use. The study revealed that in order to foster trust, organizations should ensure their culture promotes easy going control and informal relationships between managers and employees. To foster personal incentives, SMEs ought to ensure they focus on meeting customer needs, adopt an employee centered work approach and enforce an adhocracy culture that has a loosely structured work approach. To foster perceived usefulness and ease of use, it would be recommended that SMEs ensure that leaders relate with employees as teammates and as well, embrace adhocracy cultures that are easy going in nature. In addition to SMEs structuring their organizations to foster employee behaviour that leads to higher adoption rates of ICT innovation, it is also recommended that they structure their organizations to easily adopt ICT.

The study led to significant theoretical contribution by highlighting the particular manner in which organizational culture influenced ICT innovation adoption. The study showed that culture has an influence on employee behaviour that facilitates ICT adoption in addition to having an influence on actual adoption of ICT within the organization. In the latter's case, it revealed the influence of culture on intention to use and actual frequency of use. In future studies, suggestions include undertaking a similar study in the corporate setting in order to investigate how their corporate culture directly impacts their adoption of ICT. Secondly, considering a larger study population is also important in order to determine if there are significant differences or similarities with the current study. Finally, undertaking a similar study in a developed country in order to determine if there exists any location based differences.

A major strength in the study was the selection of an area of study that is currently relevant in modern society. Adoption of ICT innovation and technological disruption have in recent years, received increased attention following their impact on transforming how business is conducted. Consequently, this eased the literature search process given the numerous studies conducted by different researchers on the area. Second, there existed a wide range of relevant materials elaborating on organization culture and ICT adoption. Sources ranged from websites and peer reviewed journal articles to books and conference papers. As such, obtaining relevant statistics and studies to support findings obtained was significantly easier. Third, the selected study population easily facilitated the acquisition of data for the study. Given the large number of tech SMEs in the country, it was easy to collect data from the different practitioners. Further, use of an online survey collection technique reduced costs while improving the reach of the different respondents.

One of the weaknesses experienced in the study was uncooperative respondents. While the large number of SMEs facilitated data collection, a challenge however arose from uncooperative respondents. As a result, the researcher would make follow up calls in order to coerce respondents to provide required data. Secondly, it was challenging to contact respondents who resided in regions located in distant locations. While online questionnaires would solve the challenge easily, in some instances, respondents required to have the data collected through traditional manual forms. The implication of their requests was that it led to an increase in time required to collect and analyze data.

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