"Promoting SMEs effectiveness through innovative communication strategies and business-IT alignment"

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PROMOTING SMEs EFFECTIVENESS THROUGH INNOVATIVE COMMUNICATION STRATEGIES AND BUSINESS-IT ALIGNMENT

Abstract

The firm's effective alignment of Information Communication Technology (ICT) capabilities with the SME's business process to achieve agile communication strategies will distinguish profitable and failing firms in this global market milieu. The paper examined SMEs' communication strategies in South Africa and Nigeria by evaluating their ability to align business and IT to promote innovation and competitive edge in their operations. Quantitative data from 230 SMEs in Nigeria and South Africa were presented. The findings indicated that the business manager's knowledge of IT understanding is limited (= .29), the effectiveness of IT and business liaison and cooperation (= .30), and the dynamic of IT-based decision-making (= .33), and the SME's knowledge sharing experiences through organization learning (= -.07). These findings showed a lack of communication effectiveness due to the inability to align ICT capabilities with the SME's communications strategies. Similarly, an inverse correlation between communication and ICT infrastructure (-.26); between communication and skill (-.32); between communication and business and IT governance (-.71); between communication and ICT value that the SMEs derived from their use of information communication technology (-.78) due to lack of business and IT alignment. The paper recommends that SMEs must not rely on the acquisition of ICT infrastructure but must ensure its integration with their business processes.

Keywords BITA, economic sustainability, ICT, innovation,

communication strategies, Nigeria, SMEs, South Africa

JEL Classification D83, O32

INTRODUCTION

The impact of Small and Medium Enterprises (SMEs) on continental economic sustainability cannot be overemphasized. These firms are the vehicle to lift people out of unemployment and underdevelopment. Although South Africa and Nigeria are the two largest economies in the continent, it was estimated that 97% of Nigerian businesses are SMEs (Magaji, Baba, & Entebang, 2017). Perera and Chand (2015) established that 91% of formal South African companies are SMEs, and their contribution to the South African GDP is estimated at around 50%-60% (Ajibade, 2018). Therefore, as SMEs are vital to any nation's economic sustainability, effective communication practices are critical to driving business processes (BP), innovation, and value. Because agile communication practices is pivotal for sharing business intelligence with clients and stakeholders. However, firms must solve the problem of both IT infrastructure and network challenges, which is still a considerable problem that hinders SME's integration of Information Communication Technology (ICT). In so far, that the high cost of ICT is beyond what SMEs could afford (Mbuyisa & Leonard, 2015). Although SMEs play an essential role in alleviating poverty (Manzoor, Wei, Nurunnabi, & Abdul Subhan, 2019), yet, a

study established that telecommunication in Africa is substandard. However, one of the ways to limit the impact of the substandard and high cost of ICT adoption is to ensure that the SME's IT is aligned with its business processes (BP) because useful communication strategies are as crucial to the SME's performance, agility, and productivity, as much as the SMEs is vital to any nation's economic growth.

Previous studies have emphasized that communication is one of the crucial skill-set required by firms (Choren, 2015), and it is essential for enhancing organizational culture (Kegeyan, 2016) and for improving effectiveness (Adu-Oppong & Agyin-Birikorang, 2014). Therefore, the importance of robust communication strategies cannot be overemphasized to ensure that the SME's business process is adaptive to changes, especially disruptions due to the proliferation of technology and the embryonic nature of ICT. The importance of ICT in the operation of SMEs was significantly concerning to the economic sustainability of the New Zealand Government, that the authority nationally promotes ICT use by the SMEs (Locke & Cave, 2018). This acknowledgment accentuates the usefulness of ICT in promoting agile business communication, especially by ensuring agile business processes. Therefore, this study examined the communication strategies of SMEs in Nigeria and South Africa as the leading economies in the continent. Studies have recognized communication strategies as a necessity to ensured that ICT use is efficiently aligned to promote agile communication and firms sustainability (Alaeddini, Asgari, Gharibi, & Rad, 2017; Isal, Pikarti, Hidayanto, & Putra, 2016; Luftman, Lyytinen, & ben Zvi, 2017). Unfortunately, other studies concerning the SMEs in Nigeria and South Africa did not examine their communications in the context of the business and IT alignment maturity. As of 2016, a study suggested that some SMEs in South Africa could not use ICT maximally, as it was argued that ICT has not been transformative for their BP (Foster, 2016). Nevertheless, IT's potential in the tourism/service industry has been explored in South Africa (Mbatha, 2013).

1. LITERATURE REVIEW

1.1. The role of communication in aiding business agility

The agility of business processes depends largely upon the degree to which businesses can adapt the latest technology to perform vital functions such as correcting internal consistencies, effecting quick and efficient service delivery, and maintaining effective communications. For example, a study in Southern Brazil among businesses indicated that communication is one of the business and IT alignment elements that is critical to most promoted (Brodbeck, Henrique Rigoni, & Hoppen, 2009). Nevertheless, Luftman et al. (2012) indicated that information technology remains a crucial management issue, even to ensure effective communication as ICT has a significant impact on firms. However, to effectively communicate or develop robust communication strategies, SMEs must be able to achieve a mature business and IT alignment because the alignment of business processes with IT capabilities provides organizations with the ability to improve their functionalities, productivity, communications, and customer

services (Ajibade, 2018). Therefore, in this global business milieu, SMEs must rely on agile IT and formalize business processes (BP) and strategic information governance (Wu, Straub, & Liang, 2015). Strategic information management and formalize BP is critical for firms that are mainly operating in diverse business climates. As alluded to by Luftman et al. (2012), integration of IT is crucial, and the need is amplified for SMEs to provide a better understanding of how businesses and IT impact operations across different geographic landscapes.

1.2. Importance of communication vis-à-vis unemployment problem

In the Australian Chamber of Commerce and Industry and Business Council of Australian top eight critical skills framework for employability, communication skills top the list to contribute and remain productive, and to sustain a working relationship between clients and workers (Mashego, 2017). To address labor market imbalance, a recent study by Pitan and Adedeji indicated that communication skill remains a pivotal catalyst (Pitan & Adedeji, 2012), and the UK engineering graduates

must display key communication competencies (Mashego, 2017). Besides the importance of communication to career development, a recruit employability prospect requires communication skill (de Guzman & Choi, 2013). Recent literature bemoaned the high rate of unemployment in South Africa. However, it posited that even in the banking sector with high demand for technical skills, notwithstanding, it was argued that technical skill without soft skills like communication and problem-solving skills are inadequate (Oluwajodu, 2014) because agile communication strategies are important for managing SME's reputations (Doorley & Garcia, 2015). The problem, however, is that adoption and use of IT tools are not enough to achieve optimized communication strategies. Therefore, measuring the internal consistency of the adoption of ICT vis-à-vis business governance, IT infrastructure integration, and SME's business internal communication strategies is important and must be measured.

1.3. Internal communication methods

The SMEs must use internal communication effectively for knowledge transfer (Ramashilabele, 2011) to assist them in sharing critical business knowledge and innovations. The use of emails, brochures, and word of mouth are internal communication tools to strengthen employees' value. Effective internal communication allows SMEs to share value by using open and direct communication strategies (Morsi, 2016). However, no studies have examined the nexus between business-IT alignment and the SME's communication patterns in Nigeria and South Africa to measure how rigid their communication is, but this study covers this aspect. Therefore, SMEs' internal communications may either negatively or positively affect their productivities and sustainability; however, rigid communication culture/strategies will stifle innovation. But the small and medium-size enterprises in the continent requires innovation and productivities to break the shackle of unemployment. Notwithstanding, for SMEs to operate robust and agile African continental businesses, they must use internal communication as a strategic tool (Çoban & Perçin, 2011), especially to promote their operations and future business trajectories within and to the public. If the SME's communication strategies in this study are hindering their performance, it will negatively affect their productivity and sustainability. In South Africa, efficient internal communication methods have been studied in the mining and the Gauteng Province train project vis-à-vis, ensuring safety (Greeff, 2011). Moreover, a recent study indicated that understanding of business culture, employees, and customer engagement is promoted by internal communication methods (Doyle, 2019).

1.4. The problem of integrating ICT with communication practices

Although studies have emphasized the importance of internal communication in promoting employees' business practices and engagement (Welch, 2015), Bui (2019) studied digital communication and the difficulties of aligning innovative strategies and online and offline communication. The study reiterated that it is important for SMEs to align all communication technologies with all business processes as the study showed that faceto-face communication is not often possible with the top executives (Chmielecki, 2015). However, supposed the ICT is integrated in a way that makes communication an informal process within all companies' hierarchy, effectiveness might be improved. Although successful firms have learned to use established communication means to share the value, mission, and strategies internally and to the external clients (Aidoo, 2012). Part of the problem is the lack of sufficient literature to dissect all aspects of internal communication challenges (Ryynänen, Pekkarinen, & Salminen, 2012). Nevertheless, a lack of understanding of effective communication skills, especially by some managers, might present challenges of information overload (Aregay, 2019). Unfortunately, due to SMEs' size, there are limited resources to hire public relations (PR) officers to manage internal and external communication portfolios.

Therefore, firms' ability to use ICT capabilities to communicate their processes and results efficiently and critical knowledge are important for the marketing and visibility of their products and services. Although findings reveal that employees often hoard business information, an agile business-IT alignment might limit information hoarding and improve communication, which is essential for sustainability. However, no studies

have examined the SME's utilization and alignment of ICT in driving SMEs communications in the South African and Nigerian business context to generate comparative insights. Furthermore, one of the problems that hinder communication is noise. This noise occurs when there is interference between a given communicating parties, which hinders their ability to receive or interpret the intended meaning of messages being passed – being it semantic or physical noises (Gutierrez & Bermejo, 2018). Notwithstanding, the agility of business processes depends, to a large extent, upon the degree to which businesses can adapt the latest technology to perform vital functions such as internal consistencies, effecting quick and efficient service delivery, and maintaining effective communications. The alignment of business processes with IT capabilities provides organizations with the ability to improve their functionalities, productivity, communications, and customer services.

2. AIM

This study's main objective was to examine SME's use and alignment of Information Communication Technology innovation to facilitate agile communication and business processes effectiveness.

3. METHODOLOGY

A study methodology is an architectural frame on which a study is conceptualized that includes the formulation of study design, methods, sampling, and techniques, as well as presentation to provide valid results (Ajibade, 2018). The SMEs in the Buffalo City and Ibadan Metropolitan Municipalities formed the population of the study. The study applied a probability sampling technique, which provides chances of each SMEs being selected. However, the study adopted stratified purposive sampling, whereby the SMEs were stratified based on the industries the SMEs operated. This technique is useful for combining random sampling and non-probability (purposive) (Mitana, Muwagga, & Ssempala, 2019), by dividing large samples into clusters or strata (Wafula & Kiplagat, 2017) based on unique identifiers (such as SMEs industries). There was a need to have representative coverage across ten industries. The researcher used stratified purposive sampling, and simple randomly select SMEs across ten industries in Nigeria and South Africa. SMEs were subdivided into strata or clusters based on their industries, such as agriculture, manufacturing, automotive, construction, retails and consumables, chain stores and distribution, information communication and technology, services, health, and insurance, as well as banking and finance. The sampling techniques have been used in other similar studies (Manojlovich et al., 2015; Tarus, Gichoya, & Muumbo, 2015).

3.1. The sample size

However, based on the data from the Department of Trade and Industry (DTI) 2007 report listed in Stats SA "Rated Business Register," there were 556,000 active SMEs out of 1.87 million enterprises. Only 15% of these businesses were categorized as SMEs (DTI, 2008 p. xxviii), representing 83,943 active SMEs in the country. Although there was no business registered in Ibadan, the Eastern Cape (EC) only accounted for 6,457 (13%) of the total active SMEs in South Africa, even though EC is the third-largest population province in South Africa. Based on the sampling technique adopted, the actual sample size was calculated based on this model:

$$x = Z\left(-\frac{c}{100}\right)^{2} r\left(100 - r\right):$$

$$n = \frac{NX}{\left(\left(N - 1\right)E^{2} + X\right)}:$$

$$E = Sqrt\left[\left[\frac{(N - n)X}{n}/n\left(N - 1\right)\right]\right].$$

where N – population, r – responses share, $Z\left(-\frac{c}{100}\right)$ – confidence level c, E – margin of error, n – sample size.

However, based on the assumption that the total population in the research setting is 643, 245, the Raosoft representative sample size estimation with 95% confidence level and the p-value of ≤ 0.05 margin of error and the 'Pass So' sample size calculator software indicated that if a study can achieve a power of 90% with 100 sample size, there is no need to saturate the data with more. However, based on the PASS 11 software algorithm, this study aimed at achieving 80% power, and the re-

quired calculated sample size of 295 respondents provided a statistical power of 80%.

3.2. Data collection and analysis

The questionnaires were distributed to SMEs in Ibadan North Metropolitan Municipality Nigeria and Buffalo City Metropolitan Municipality in South Africa based on the nature and similarity of the municipalities as commercial hubs. Out of the returned questionnaires, incomplete responses were removed, while additional qualitative data were collected from 43 SMEs, but only survey responses were presented in this paper. This paper's unit of analysis is the sample of 230 SMEs comprising firms' executives, senior managers, IT officers, and SME employees for the survey. Descriptive and inferential statistical analyses were performed using the quantitative data. The questionnaires cover SME's communication strategies vis-à-vis IT governance, IT infrastructure, employee skills, and IT contributions (metric) measurement. The study combined all the identified six variables that ensure business and IT alignment and measured it against the SMEs' communication strategies. The questionnaires constructs were coded using the SPSS version 24, and the analysis results were consolidated into a manageable dataset and presented in the findings.

4. RESULTS

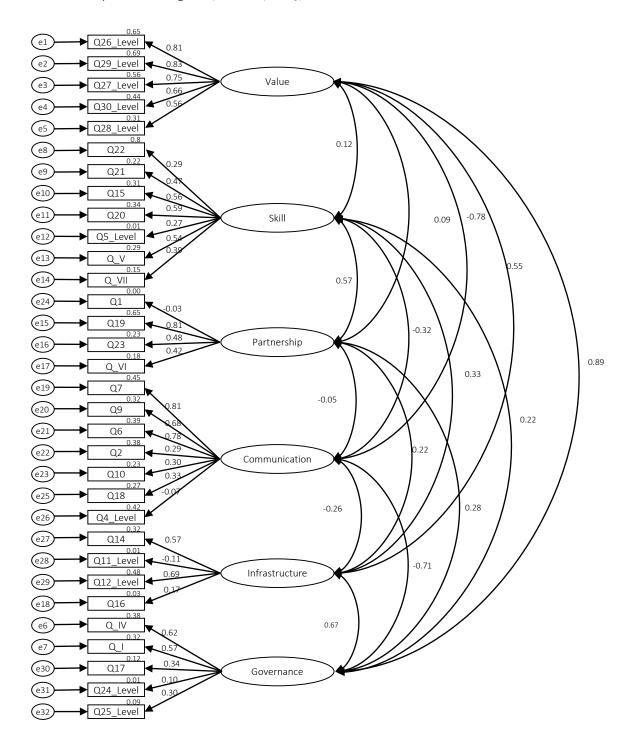
4.1. Styles of communication among IT specialists and business departments

Business units need to be able to adjust to the introduction of new systems, and there needs to be meaningful communication between all the units to avoid the disruption of the performing of daily tasks. Without well-established communication practices, IT personnel may not have the means to understand the needs of their business departments and, consequently, be unable to provide the most appropriate and effective IT contributions to business divisions. Business organizations need efficient and effective information packaging and dissemination strategies that are implemented with innovative IT capabilities to foster sound communication practices. Sound

communication practices include the ability and the willingness to share business ideas and promote the establishment of communication channels that are sufficiently flexible to facilitate the exchanging of information. A total of 32 respondents (13.9%) indicated that they perceived that the communication styles between business and IT units in their organizations were inflexible and formal, while five (2.2%) did not respond to the question. Furthermore, from the responses of the respondents, it was found that their preferred styles and modes of communication were represented by verbal communication (58%), electronic communication (65%), email messages (61%), meetings (56%), social media (25%), and telephone communication (40%).

4.2. Factor analysis of the alignment of SMEs communication and ICT integration

Factor analysis permits assessments to be made of how changes in a particular criterion, such as communication or governance affect alignment. The researcher performed a factor analysis in which one alignment criterion was algorithmically simulated in each case to measure its relationship with the remaining variables or criteria, to determine whether an increase or decrease in the output, in terms of small changes in one-factor loading, may change the relationships which exist among the criteria. Since the Business and IT Alignment (BITA) constructs were forty-one, the factor analysis effectively reduced complex and multiple constructs into a compressed analysis using complex statistical and mathematical algorithms to identify features of alignment as indicated in the generated patterns builder in Figure 1. The factor analysis of SME's IT alignment and communication constructs yielded a value of 0.81, 0.68, 0.78, 0.29, 0.30, 0.33, and −0.07 (see Figure 1) from the factor loading of the seven constructs tested vis-à-vis SMEs communications and the use of ICT as an indispensable asset. The implication of these results will be discussed under the implications of the factor analysis. The internal consistency, as depicted by the Cronbach alpha, presented a satisfactory result for this exploratory analysis of communication strategies amongst the SMEs vis-à-vis business and IT alignment. The value of the Cronbach alpha that



Note: The AMOS metric was culled from the Ph.D. dissertation title: Levels of Utilisation and Alignment of Business Information Technology in Small and Medium-sized Enterprises in Africa: Study of Nigeria and South Africa.

Figure 1. Factor analysis model to illustrate SMEs communication strategies vis-a-vis their BITA _ (see each construct assigned coding and variable labels in Appendix)

validates the communication variables was .703, while for the SMEs, IT infrastructure Cronbach alpha of .873 showed significant reliability of the constructs tested. The higher the value achieved

from 0 to 1, the more clear the internal consistency of the measurement achieved as Cronbach alpha of 0.06 is regarded as an acceptable value (Brodbeck et al., 2009).

5. DISCUSSION

Seven constructs were tested to examine the SME's communications strategies vis-a-vis the Information Technology alignment. Despite the widely reported findings that ICT infrastructure in Africa is substandard (Manzoor et al., 2019), the findings revealed that IT plays a significant and positive role in advancing the SME's knowledge sharing practices (r = 0.81). Especially when IT capabilities serve as a business intelligence tool to increase decision-making (Forsgren & Sabherwal, 2015), furthermore, IT promotion of the business process communication effectiveness is significant (r = 0.68). This findings on IT and communication effectiveness for knkowledge sharing was in line, and confirmed by the study of Ajibade, Ondari-Okemwa and Matlhako, (2019). Similarly, the extent of, and the culture of knowledge sharing appreciation was significantly positive (r = 0.78). Nevertheless, the extent of business managers' understanding of the IT business environment (r = 0.29) was very low. Despite an established report that the use of IT increases business returns when IT is used to drive business collaboration (Morgan, Richey Jr, & Autry, 2016). The findings indicated that the SMEs in Africa might not be getting expected returns on IT investment, as business manager lacks sufficient understanding of the IT business environment (r = 0.29), and insufficient collaboration between business and IT units (r = 0.30), even though they are aware of the significance of the IT role in driving business intelligence (r = 0.81), and in promoting knowledge sharing (r = 0.78).

Furthermore, Forsgren and Sabherwal (2015) affirmed that the use of IT as a business intelligence tool could improve the level of business control capabilities in decision-making, just as IT capabilities are useful for business accounting. However, this will require agile communication between business executives, IT units, and the accounting department. Nevertheless, the findings showed that the effectiveness of IT and business liaisons or cooperation were very poor (r = 0.30), and this finding indicated that the SMEs had not aligned their IT infrastructure to enabled seamless interaction and cooperation. Howbeit, different units within the firms must create and nurture collaboration through networking. But it appears that

the SMEs'ability to achieve agile business intelligence through cooperation might be suffering from setbacks as indicated by r = 0.30, which is considered significantly low. In part, this poor liaison explains while there was significant negative r = -.07 for lack of an organizational culture of knowledge sharing. Nevertheless, the r = 0.30 is very low for SME industries that intend to compete in this global business milieu, like Morgan, Richey Jr, and Autry (2016) indicated that IT is vital to drive business collaboration in this competitive environment. However, this problem seemed to be a result of the SME's inability to develop IT decision-making culture by involving top, middle and operational staff across the firms. This assertion was revealed from the findings in which the firm's power dynamics in making important ITbased decisions yielded (r = 0.33).

Also, part of the findings revealed the inability of some of these firms to align ICT to their advantage in that the SME's knowledge sharing experience through organizational learning was negatively significant (r = -0.07). Unfortunately, this finding showed that the SMEs have not been able to use IT in all their business processes to improve competencies through organizational learning. Thus, as indicated by Rodger and Bhatt (2014), showing an inability to deploy ICT to their competitive and strategic advantage. Furthermore, Figure 1 revealed an inverse correlation for some output criteria. It means that some of the alignment criteria contributed to the agility of the SMEs, others tended to militate against. However, SME misalignment practices have severe negative implications for BP's effectiveness, performance, and sustainability.

5.1. The implication of the findings on the SMEs communications strategies

The value of r = -0.7 (Figure 1) showed a lack of the SMEs' ability to integrate adequate communication strategies and platforms into their business and IT governance. ISO/IEC 38500 provides six standards to guide IT governance in organizations. Although the successful integration of BITA applying these standards, the negative correlation between governance and communication might suggest a lack of understanding of IT govern-

ance among their employees. In the Netherlands, Smit and Hillegersberg (2013) surveyed the SMEs, which had a combined sales figure of around EUR 500 million, and they had spent approximately EUR 25 million on IT infrastructure during the same period. Unfortunately, the amount spent on IT in the Netherlands, a small country by European standards, would amount to 375 million South African rands. It is doubtful whether the top 100 SMEs in the continent could have set aside such budget on the IT infrastructure, and this is the more reason, SMEs must ensure a matured business and IT alignment for communication, and business governance to achieve maximum values from the ICT and ensure business sustainability.

Regrettably, the findings indicated a strong negative correlation (r = -0.71) between the SMEs' IT governance and their communication strategies in Figure 1. It could be concluded that the inability to formulate effective communication strategies could undermine their BPM due to

a lack of adequate business and IT governance. The analysis revealed a negative correlation (r = -0.5) between partnerships and communication of the business and IT units of these SMEs. Moreover, without effective communication practices, the business and IT units cannot enjoy an efficient working partnership. The lack of a positive correlation between partnership and communication could suggest that IT and business units lack effective communication. However, these executives must allow the junior and middle managers to participate to a great extent in the business and IT governance of their firms. There was also a negative correlation (r = -0.26) between communication and business and IT infrastructures, suggesting the likelihood of practices that could result from making incorrect or poor judgments or decisions about communication strategies. A negative correlation (r = -0.32) between communication and skill also suggest that communication skills between the top and operational staff, and business and IT units must be strengthened.

CONCLUSION

The study's major focus was to evaluate the SME's use and deployment of ICT and its alignment with its business process to drive strategic communication of their firms and promote agile communication, organizational learning, and knowledge sharing. This paper debated the role of communication in sustaining agile business operations, and the nexus between business and IT integrations were presented. Subsequently, the role of communication in driving investment decisions and the importance of choosing efficient internal communication strategies were discussed. The study argument was premised on the assumption that firms that have achieved mature business and IT alignment would thrive in this competitive business milieu, provided there is a robust competence to leverage ICT capabilities. Although the business executives understand the role of ICT in promoting agile business communication strategies, still, the lack of alignment of business and IT infrastructure serves as impediments. In conclusion, most SMEs' communication styles are rigid and inflexible, which might impede their business intelligence sharing agility. Nevertheless, electronic communication (65%), email messages (61%), verbal communication (58%), meetings (56%), telephone (40%), and social media (25%) were the most preferred communication strategies used by the SMEs.

RECOMMENDATIONS

The paper recommends that SMEs must ensure that their business and IT are aligned to drive the strategic and operational goals of these firms. Such as using mobile communications tools and social media platforms as official communication platforms. As the use of social media will promote informal communication patterns amongst the staff in which they can interact casually and share problems freely. Thus, reducing the rigidity of business communications and replacing it with platforms that ensure open/continuous informal dialogue across the business and IT units. SMEs must ensure that their inter-

nal communication strategies use the capabilities of modern ICT to their competitive advantage. These firms must ensure that their business managers' knowledge is up to date to show a robust understanding of IT within their business milieu. They should use their employee strategic IT skills to their benefit to drive business and IT integrations. If all these recommendations are considered, the SMEs in both countries will improve the effectiveness of business and IT liaison, promote agile IT and business governance, and create agile knowledge sharing for effective decision-making.

AUTHOR CONTRIBUTIONS

Conceptualization: Patrick Ajibade. Data curation: Patrick Ajibade. Formal analysis: Patrick Ajibade. Methodology: Stephen Mutula. Resources: Stephen Mutula. Software: Patrick Ajibade. Supervision: Stephen Mutula.

Validation: Patrick Ajibade, Stephen Mutula. Writing – original draft: Patrick Ajibade. Writing – review & editing: Stephen Mutula.

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APPENDIX

FA _ id	Constructs/Variables tested	
Q26 =	The use of integrated IT and business metrics to measure ITs contribution	Value
Q27 =	SMEs implementation of standards and benchmarks practices adopted	Value
Q28 =	The extent of SMEs assessment and review of IT investments	Value
Q29 =	Circles of reviews of IT and business continuous improvement is practiced	Value
Q30 =	IT function demonstrable contributions to achieving SMEs strategic goals	Value
FA _ id	Constructs/Variables tested	
Q22 =	Extent of interpersonal interaction culture across IT and business units	Skill
Q21 =	SMEs' employee learning path opportunities beyond their operational units	Skill
Q15 =	Level of disruption caused by business and IT changes	Skill
Q5 =	company's IT and business communication styles	Skill
Q_V =	IT and the business innovation processes	Skill
Q_VII =	Business and IT managers role in the company's innovation	Skill
FA _ id	Constructs/Variables tested	
Q 1 =	Extent of IT specialists understanding of the firm's business environment	Partnership
Q 19 =	SMEs readiness for technological change	Partnership
Q 23 =	SMEs' ability to attract and retain the best IT and business employees	Partnership
Q VI =	IT role in customer management strategies	Partnership
FA _ id	Constructs/Variables tested	
Q 7 =	IT role in the firms' knowledge sharing practices	Communication
Q 9 =	IT promotion of the business process communication effectiveness	Communication
Q 6 =	Extent of, and the culture of knowledge sharing appreciation	Communication
Q 2 =	Extent of business managers understanding of the IT business environment	Communication
Q10 =	The effectiveness of IT and business liaisons (cooperation)	Communication
Q18 =	Firms power dynamic in making important IT-based decisions	Communication
Q 4 =	SMEs knowledge sharing experience through organizational learning	Communication
FA _ id	Constructs/Variables tested	
Q14 =	The scope of architectural integration	Infrastructure
Q11 =	The scope of your IT systems in supporting business process and functions	Infrastructure
Q12 =	The articulation of and compliance with IT standards	Infrastructure
Q16 =	Scope of IT infrastructure flexibility to business and technology disruptions	Infrastructure
FA _ id	Constructs/Variables tested	
Q_IV =	IT department role in business process planning	Governance
Q_l =	Information Technology value to business operations	Governance
Q 17 =	extent to which firms fosters an innovative entrepreneurial environment	Governance
Q 24 =	The process used to measure SMEs IT contributions	Governance
Q 25 =	The use of business standards to measure IT contribution to the SMEs success	Governance