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Diffusion of innovation theory for information technology decision making in organisational strategy

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Abstract

Over the past two decades, there has been rapid change in technologies and their innovations. Organisations' continuous increasing reliance on information technology (IT) is therefore challenged. This has inevitably caused many organisations to adopt "quick fixes", to support and enable their strategies. What is even more problematic is how the technologies are innovatively used or diffused, which is expected to transform, support and enable competiveness.

This study has two primary objectives: (i) to examine the factors that influence the diffusion of information systems (IS) and technologies (IS/IT) in enabling and supporting organisational strategy and (ii) to gain a better understanding of how decisions are made in the course of applying technologies for organisational strategy.

The Diffusion of Innovation (DOI) was employed as a lens to examine influencing factors and how decisions are made in applying technologies for organisational strategy. The factors that influence the diffusion of IS/IT includes organisational structure, communication across the hierarchy, the obligatory passage point (OPP) of people, know-how of technologies and implication of process. The decisions that guide the way in which IS/IT are diffused to support and enable organisational strategy were found to be threefold as depicted in the framework: organisation, technology and governance.

Key phrases

diffusion of innovation, information management; information system (IS), information technology (IT), organisation strategy

1. INTRODUCTION

Information technology (IT) consists of network, hardware and software for various purposes, including hosting and integration of systems and storing, disseminating, retrieving and processing information. According to Deb (2014:26), IT is concerned with the gathering, storing and manipulation as well as the transferring of information through the use of electronic devices. Oon and Sorooshian (2013:139) define IT as "those technologies engaged in the operation, collection, transport, retrieving, storage, access, presentation, and transformation of information in all its forms".

Thus organisations increasingly continue to rely on IT to perform their day-to-day activities and to achieve their strategic purposes. Many organisations depend on IT capability to enable and support strategy. For example, some financial institutions rely on IT for

competitive advantage and service offerings to clients (Liu, Song & Qian 2008:1560). According to Oluwatolani, Joshua and Philip (2011:64), IT and e-banking are playing a vital role in establishing the competitiveness of economies as well as improving productivity and efficiency in both private and government banking strategies. According to Marinč (2013:6), "Gaining competitive advantage in today's business service organizations is a very serious task for managers, because they need to find a way to deliver superior value to their customers".

Organisations periodically employ strategy to achieve their goals and objectives. According to Thompson, Peteraf, Gamble and Strickland (2012:49), an organisational strategy is an action plan that decision makers employ to compete successfully, to enhance performance and to grow their business for competitive advancements. Grant (2016:152) asserts that an organisational strategy helps with the effective management of organisations' activities, including future goals. Organisational strategy undergoes different stages and is influenced by various factors requiring decisions as it progresses. Organisations require a strategy in in order to achieve its goals.

Some organisations have therefore employed IT as an enabling innovation that guides their organisational strategy. According to Chen, Wang, Nevo, Jin, Wang and Chow (2014:327), IT plays a vital role in an organisations' capability to improve business performance; hence implementing new technologies to enable a competitive edge has become a central thrust and a vital strategy for modern organisations. However, how IT is diffused to enable and support organisational strategy continues to be a challenge for many businesses.

Rogers' Diffusion of Innovation (DOI) theory is regarded as one of the most popular theories for studying the adoption of IT and understanding how IT innovations spread within and between organisations (Zhang, Yu, Yan & Spil 2015:1). The DOI theory focuses on the manner in which a new technological idea, artefact or technique (or the new use of an old one) migrates from creation to use. Nemutanzhela and Iyamu (2015:606) employ the DOI theory to examine the diffusion of competitive intelligence for organisational strategy. In DOI, technological innovation is communicated over time through particular channels among the members of a social system (Rogers 2003:79).

Thus we asked the question, how can DOI be used to diffuse IT to influence and guide decision making in organisational strategy? In answering this question, we first examined how decisions are made in the course of applying technologies for organisational strategy. Second, we employed DOI as a lens to view and understand how technologies can be diffused for organisational strategy.

2. ORGANISATIONAL STRATEGY

Organisational strategy includes activities that an organisation intends to undertake to achieve its short- and long-term goals. Hough, Strickland, Gamble and Thompson (2011:4) define organisational strategy as "management's action plan for running business and conducting operations". Mua (2016:4) suggests that strategy is a matter of choices, deciding what particular kind of value an organisation wants to deliver to whom. Therefore this plan of action requires implementation to achieve its goal. Nduati (2014:14), referencing Thompson and Strickland (2003:365), argues that strategy implementation "is viewed as the process that turns the formulated strategy into a series of actions and then results to ensure that the vision, mission, strategy and strategic objectives of the organisation are successfully achieved as planned". In many organisations, strategy cannot be enabled or executed by itself; hence innovation, such as IT, is required. It is the responsibility of both business and IT to translate organisational strategies into systems and initiatives that IT has to implement (Benson, Bugnitz & Walton 2004:6).

Organisational strategy focuses on growth, profitability, sustainability and competitive advantage. The adoption of technologies is one of the significant factors for sustainability and competitive advantage (Srivastava, Franklin & Martinette 2013:51). IT can be and is often used to enable these focuses of organisational strategy, in that it allows decision-making systems to be rapid or instant and enhances the possibility of success (Molloy & Schwenk 1995:3).

Some organisations experience challenges in successfully implementing technologies. This could be attributed to the complex nature of technology. Christensen (2013:82) explains, "Technology development is generally regarded as an unpredictable, probabilistic endeavour". Although technology creates accountability, it also creates uncertainties for

some managers and employees as it unearths errors and highlights poor management practices. Srivastava *et al.* (2013:49) posit that technologies create uncertainty in organisations, persuading and changing individual attitudes, towards adopting technologies can be a challenge in areas such as organisational strategy.

Organisational strategists develop and test varying approaches to make sure that the organisational impact is known and that the changes required are possible and realistic within estimated time and cost parameters (Courtney 2003:15). Some of these approaches are checkmates by decisions, using technologies through assessment and measurement of the goals and objectives. When setting goals, people must be engaged and allowed to challenge the assumptions (Amabile & Kramer 2012:2). Strategic planning has proved to be very useful but limited. It is a technical fix that addresses only part of the question of organisational effectiveness and only deals with some of the dilemmas organisations face (Fairholm 2009:4).

For strategy execution to succeed, leaders must know their businesses very well and show enough interest and passion to execute the strategy (Bossidy, Charan & Burck 2011:31). In many cases, strategies are developed by a few executives and remain something that only the chief executive officer and the management team understand (Sullivan 2011:3). This makes it challenging and difficult to diffuse across the organisation, mainly because although strategy is developed by "a few", it requires inclusiveness in its implementation. Therefore, executives must communicate strategies to employees by translating them into actions that they can easily understand and carry out daily (Sousa Filho, Wanderley, Gómez & Farache 2010:296). However, communication across levels and structures within organisations has never been easy. This has had a negative impact on organisational strategy in some organisations for many years.

3. DIFFUSION OF INNOVATIONS

DOI is a sociology theory pioneered by Rogers. DOI has been defined as a process by which innovation is communicated through certain channels to members of the social system over time (Sampaio, Varjao, Pires & De Moura 2012:4). The theory focuses on the fact that new ideas (innovations) or technologies, are being created continually and that

communication becomes vital in spreading or disseminating the innovation to society or communities.

This is primarily because acceptance of the innovation or technology will depend on the individual's attitude towards that innovation. Also, communities have a choice in rejecting or accepting the innovation. DOI is a theory that strives to explain how, why and at what rate new ideas and technologies are transmitted or spread through cultures (Alqahtani & Wamba 2012:4721). Thus different approaches and theories, such as DOI, have been employed by some organisations to address this challenge, as well as to guide decision making in the diffusion of strategic plans.

DOI consists of various characteristics of innovation, including relative advantage, compatibility, complexity, trialability and observability (Comer & Kendall 2013:121), enabling the theory to guide and facilitate decision making during innovation and diffusion of the innovations within environments. As shown in Figure 1, the innovation-decision process of DOI comprises five stages: knowledge, persuasion, decision, implementation and confirmation (Sang & Tsai 2009:18).

It is through this process that the innovation is communicated to the society or community. Depending on the individual's attitude they may either accept or reject the innovation. Therefore it is through the characteristics that potential adopters are able to evaluate the innovation. As mentioned earlier, DOI is a sociology theory but it may be used in other fields, such as IS.

For many years, DOI has been used by practitioners in both industry and academia. This could be attributed to the fact that the theory focuses on Diffusion of Innovation through certain communication channels over time within a particular social system (Oliveira & Martins 2010:12).

Zhang *et al.* (2015:2) suggest that DOI is one of the most prevalent theories to study the adoption of IT and understand how IT innovations are diffused within and between societies. According to Sahin (2006:2), numerous studies from different and diverse disciplines, such as political science, public health, communications, history, economics, technology and education, have used DOI as a framework to diffuse and adopt technologies.

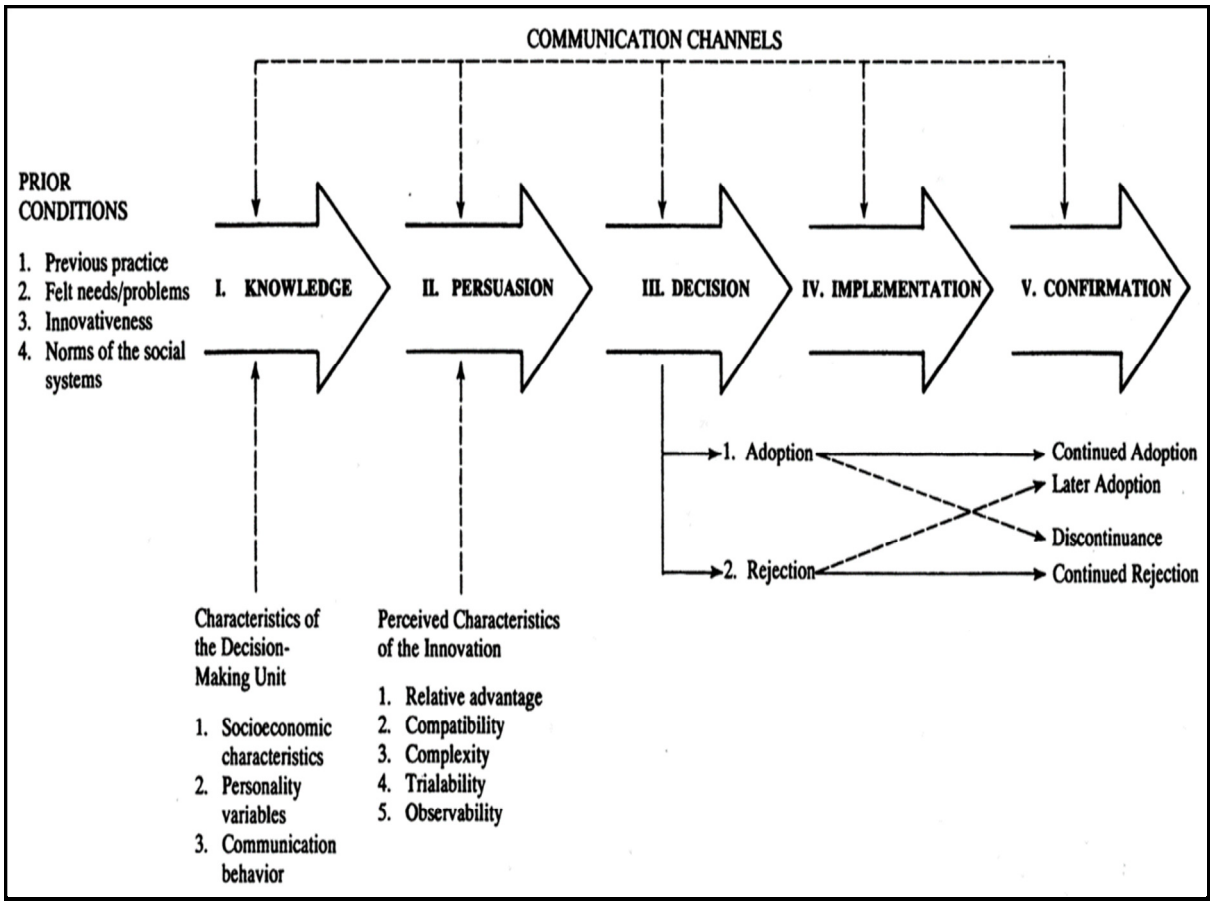

FIGURE 1: Innovation-decision process

Source: Rogers 2003:78

The innovation of diffusion theory provides a foundation that can be used to guide and understand the factors that influence innovation diffusion within a social system, including organisational strategy. Due to the criticality of people's roles, Russell and Hoag (2004:108) apply DOI to understand and analyse IT innovation implementation challenges in IT supply chain. This strength forms the basis for understanding the adoption (Straub 2009:633) of artefacts such as IT for organisational strategy enablement and support. The usefulness of the theory, according to Straub (2009:629), is that it is adaptable and flexible and it can fit a formal and informal environment during adoption.

Technology innovation can create uncertainty in the minds of potential adopters and the environment at large. Rogers (2003:159) suggests that the innovation diffusion process is an

uncertainty reduction process. Thus DOI is a theory of how, why and at what rate innovation and technologies disseminate through cultures, at both individual and organisational levels (Oliveira & Martins 2010:11). Rogers (2003:18) introduced perceived attributes of innovation that assist in reducing uncertainties about innovations.

In applying the DOI theory, it is important to understand influencing factors and potential adopters and their decision-making process. Some of the critical factors in decision making include who makes the decision and how the decisions are made, whether willingly, freely or voluntarily. However, "one of the most distinctive problems in the Diffusion of Innovation is that the participants are usually quite heterophilous" (Rogers 2003:19). DOI theory emphasises that interventions must fit the perceived needs, values and beliefs of key stakeholders (Dingfelder & Mandell 2011:599).

In recent years DOI theory has been used in many studies worldwide. This includes a study by Zhang *et al.* (2015:1), in which they applied DOI to understand the factors that influence patients' acceptance and use of consumer e-health innovations at a primary care clinic in Australia. In South Africa, Nemutanzhela and Iyamu (2015:603) used the DOI theory to analyse IS studies. In that study it was asserted that the theory brings a different perspective to the field of IS to understand how innovations are diffused within an environment. However, there are implications and challenges in how the theory is applied. The challenges are critical, due to the fact that the application of the theory has an impact and shapes the result of the study that employs it.

4. RESEARCH STRATEGY

Data collection was conducted by reviewing documents from peer-reviewed literature on organisational strategy, IT, IS and DOI. For peer-reviewed sources, literature published from 2009 to 2017 was used. The data was interpretively analysed, guided by the DOI theory, employing the innovation-decision process.

Concurring, Zhang et al. (2015:4) conducted an electronic health study positing that Rogers' innovations diffusion theory is one of the most popular theories for studying adoption of information technologies and understanding how IT innovations spread within and between communities. Thus, seeing that one of the objectives is to gain better understanding of how

decisions are made in the course of applying technologies for organisational strategy, the DOI was applicable.

5. EXAMINING THE CHALLENGES OF THE ORGANISATIONAL STRATEGY

Based on Section 3, two main points are clear: organisational strategy requires the diffusion of IT for its enablement, support and implementation and decision making in the diffusion of technology continues to be a challenge. Some of the factors that manifest into challenges include organisational structure, communication across the hierarchy, obligatory passage point (OPP) of people, expertise in technologies and implication of process.

5.1 Organisational structure

Hierarchical structures in an organisational setting are purposely designed to instil uniformity, order and levels towards achieving the common goals and objectives of the organisation. However, from both strategic and operational perspectives, this sometimes poses a challenge for employees' actions and interactions. Organisational structure constrains or enables the diffusion of IT that enables, implements and supports the organisational strategy. According to Tran and Tian (2013:6), in most instances organisational structure is centred on two dimensions; centralised systems and decentralised systems.

In traditional hierarchical organisations diffusion of organisational strategy through IT is determined, enabled and implemented from a centralised system; executives and top management select and adopt technologies that will be employed to disseminate the strategy for the employees and they can reject their subordinates' choices. According to Iyamu and Roode (2010:6), all employees are expected to implement the strategy as defined by the management. Alternatively, in a decentralised system employees have the knowledge and understanding of the technologies that can be employed to enable and diffuse the organisational strategy therefore they manage to influence, persuade and override the decisions that were assigned to them by the centralised system (Tran & Tian 2013: 8).

Organisational strategy increasingly emerges from non-managerial employees as they interact with technologies and other stakeholders. Top management can be consciously and unconsciously removed from the interactions that occur among non-managerial employees in the tasks about organisational strategy. This affects insights and has consequences in the implementation of organisational strategy.

In many organisations top management makes most of the important decisions concerning the diffusion of technologies and overrides decisions made by their subordinates. Top management continuously makes decisions without involving the implementers (subordinates), thus buy-in to the strategy from employees becomes a challenge. This manifests itself into who should decide which technologies to implement, how these technologies will be implemented and why these technologies should be implemented.

5.2 Communication across the organisation

In many organisations, IT is increasingly used for many activities, such as strategic management, communication and collaboration, access to customers, managerial decision making, data management and knowledge management. This is primarily because it helps to provide an effective means of organisational productivity and service delivery (Adeosun *et al.* 2008:3).

In order to develop robust strategies and ultimately sustain their survival, some organisations are under extreme pressure to change or adapt quickly to their environments (Ghobakhloo, Hong, Sabouri & Zulkifli 2012:37). Another reason that can be attributed to adoption of innovation is that the interaction and communication channels in an organisation promote useful social networks within an environment. Potential users must clearly see the need for change if they are to support change. Also, communication that promotes discussion within an organisation brings about a different type of knowledge and information that requires and leads to greater diffusion.

As much as the adoption of systems and technologies continues to engineer value and competitiveness, many organisations will continue to consider their investments in IT. Also, past failures in competitive organisations tend to make decision makers risk-averse to the adoption of systems and technologies that promise strategic advantages. Some of the key

challenges in adopting technology are associated with human factors. Issues associated with user awareness, project management and the organisation's culture are some of the reasons why the implementation of technology adoption has mostly failed (Govender & Pretorius 2015:2).

5.3 OPP of people

Within actors' networks, there is always a focal actor who problematizes and defines compulsory activities for other actors. The non-negotiable nature of such as activities makes them obligatory passage for all actors within that network. From the perspective of actor-network theory, Timpka, Bang, Delbanco and Walker (2007:432) describe the OPP as a channel through which actors have to pass through in order to satisfy the interests that have been endorsed and assigned to them by the focal actor (Walton 2013:5).

The OPP is the point of access into this collective action and is, according to the actor network theory, irreversible. This implies that actors reproduce their tasks through the same channel that was defined for them, without negotiation. Rhodes (2009:14) argues that the focal actor controls the actors' activities at irreversibility, to achieving outcomes.

With or without the OPP, there are several challenges that the organisation faces in the decisions to make use of IT. However, since organisational strategy affects entire organisations, some impeding factors, including process, people, technology and culture, influence implementation. Thus, OPP helps with control measures in strategy implementation, especially in large organisations. Otherwise many decisions relating to the implementation of an organisational strategy will be subjective in relation to individuals' interest.

However, the OPP restrains innovation in that it does not allow employees (the actors) to be creative in their tasks. Lack of creativity can be a derailing factor in the implementation of organisational strategy. With OPP, decisions are made from a central point – the focal actor – irrespective of the actor's knowledge and skills to make such decisions. Also, it can add to prohibitive as new ways are not explored for the betterment of implementation of the strategy in the organisation. This has an impact on employees' development and subsequently on the organisations' competitiveness.

In this instance communication becomes the OPP because in order for the key decision makers to decide on the organisational strategy, they should possess an extensive understanding of critical factors, such as the organisation's current business processes, organisational structure, culture and work environment and financial and economic strength. Thus, decisions and decision makers are critical to organisational strategy and its implementation.

5.4 Know-how of artefacts

Humans' knowledge of technologies artefacts from specialist and management perspectives are key to decision making that guides enabling and supporting organisational strategy. However, this is accompanied by concerns and challenges in decision making. Those who have the knowledge of available technologies will either accept or reject the adoption or use of the technologies to enable and support the organisational strategy. Accepting the new technologies may stem from having knowledge about them or being persuaded by fellow members. Those who reject the innovation are not necessarily aware of the value or the effect on their day-to-day operations.

In the same way, decision making concerning which systems and technologies to implement for organisational purposes is based on the knowledge of the artefacts. Awareness of available technologies enables and eases decision making in the adoption and use of technologies to enable and support organisational strategy. The knowledge of how systems and technologies can enable or constrain are decisions defined by skill sets, which are scarce in many organisations.

Expertise is about knowledge and skills that are acquired over time. What is even more important – but challenging – is the ability to retain those employees with essential skills. This signifies the criticality of people in any organisation. Organisations rely on employees' decision making for organisational strategy, which determines success or failure through its ability to be sustainable and competitive. Thus, proficiency does not stop with the individuals' knowledge, but with the collaborative ability of aligned interests.

5.5 Implication of process

The activities and operations of an organisation are based on processes arising from many benefits, including uniformity, fairness, legitimisation and orderliness. These factors impact culture, value, sustainability and competitiveness through organisation strategy. These factors do not only affect the organisational strategy directly, they also do so indirectly through the implications of tools, such as IT that is used to enable and support the business goals and objectives.

The implication of processes is based on whom, why and how they were formulated in the organisation. Processes are developed by people for various reasons. Processes are required to communicate the activities and innovations to the entire organisation. Failure to do so jeopardises the potential benefits and value of such initiatives. However, the innovation-decision process implements the decision outcome irrespective of whether it is accepted or not. Therefore it would not be recommended to fault the process if the decision is not favourable to the organisation.

So, in order for the organisation to manage and control the process, there must be rules, processes and procedures that they need to follow in order to make informed decisions. Corporate governance plays a major role when it comes to decision making, because it makes sure that the interests of a company's many stakeholders are looked at in a balanced or equal manner.

When the innovation is not properly communicated to a social system (the organisation), then the usefulness or intention to use is defeated. It therefore becomes a loss to the organisation that has invested time and resources on the innovation. Organisations also create products through a formal or informal process, assuming that the social system will appreciate them. Therefore it is worth taking a risk rather than not taking it at all because it is difficult to predict potential adopters' preferences.

6. DOI FOR IT DECISION MAKING IN ORGANISATIONAL STRATEGY

As presented in the above section, we examined the challenges that affect organisational strategy through the diffusion of IT. The data was analysed through the lens of the

innovation-decision process, using five innovation-decision process stages to ask questions such as:

- Who had knowledge of the challenges affecting organisational strategy, how was that knowledge acquired, where was the knowledge acquired, when was the knowledge acquired and why was that knowledge acquired?
- Who was persuaded to adopt the organisational strategy to address these challenges, how were they persuaded to adopt organisational strategy, who persuaded them, why were they persuaded?
- How was the decision made, who made that decision, what was the decision that was taken?
- How was it implemented, who implemented the decision taken?
- How was it confirmed, who confirmed it, where was it confirmed and why was it confirmed?

The findings were interpreted from which an IT decision-making framework was developed. This was done through three main steps: (i) from the analysis, the most prevalence factors were identified; (ii) subjectively, the impacts and influences of the factors were articulated; and (iii) based on their impacts and influences, relationships were drawn and the factors were linked with each other.

The primary aim of the framework, as shown in Figure 2, is to ease diffusion of organisational strategy through IT decision making. The framework consists of three main components: organisation, technology and governance, which define and shape IT decision making in diffusing organisational strategy.

The discussion of the components below should be read with Figure 2 to gain a better understanding of the framework.

FIGURE 2: IT decision-making framework for organisational strategy

Source: Developed by the authors

6.1 Organisational activities

The organisational strategy needs to cater for what needs to be done within the organisation. People with various IT and managerial skills collaborate in order to enable the organisation to achieve its goals. Operations are carried out by people with the intention of achieving the organisational goals. Concerning people in the organisation, this refers to employees, executives and non-executives board members. This creates a culture among people through their interaction when undertaking various operations within the organisation. The culture develops and expands as people interact with each other. This culture is created for people by people in order to achieve the organisational goals. The culture of each

organisation differs according to the values and goals each organisation has. There is no organisation that can operate without being influenced by a certain culture.

Activities drive and form part of organisational strategy. As shown in Figure 2 above, organisational activities consist of three elements, culture, people and operations over time. These elements also influence decision making in the use of IT. Thus, they are used to enable IT decisions through which organisational strategy is diffused. However, the same elements at the same time can also constrain the activities that they were made to support and enable.

Every organisation is built upon and operates within culture. The culture of an organisation is built over time, not necessarily by rigid policies, but by people's actions. People formulate culture through their conscious or unconscious behaviour. This eventually becomes the norm and it is institutionalised as a way of doing things (culture). The same culture guides the formulators, individuals and groups within the organisation in carrying out their tasks, roles and responsibilities, including the operations (processes and activities) that contribute to diffusing the organisational strategy.

In supporting and enabling organisations for sustainability and competitiveness, items in the organisational strategy are mapped to IT artefacts (technologies, systems and network), which require decisions. IT decisions are made in accordance with the operations of the organisation, as enacted by people within the culture at the time, in diffusing organisational strategy. Thus interaction among people, using different means, facilitates the decisions that guide the diffusion of organisational strategy through technology.

6.2 Technology

Technology is a body of knowledge devoted to creating tools, processing actions and extracting materials. Technology is used to accomplish various tasks in our individual daily lives. In addition, organisations in recent years have increased their reliance on technology. In the context of diffusing organisational strategy through IT decisions, the technology component constitutes three factors: the dimension of systems, innovation and adoption.

Dimension of systems consists of IS and technologies and their dynamic use in diversity and variety. It is therefore instrumental in enabling and supporting plans, such as the

organisational strategy. Thus, when and how they are used is very critical, hence decision making is always vital. Decisions are influenced by the culture of the organisation as depicted in Figure 2. In order to ensure evolution of systems and technologies to continue to support the organisational strategy, innovation is inevitable.

Also, the operations of the organisation determine the types of innovation that are embarked upon. Through interactions and actions innovations are carried out by people. They do these for specific purposes, such as diffusing organisational strategy through various means at different times, using technology. In order for innovation to be successful in an organisation, collaboration with different stakeholders is needed. Until innovation is adopted its purpose is not complete. The adoption of systems and technological innovations to enable and support organisational strategy includes decisions at various levels. The role of technology in the diffusion of organisational strategy is influenced and guided by governance.

6.3 Governance

Governance is an agent of change in that it is used to guide processes and activities from current to desired states. IT decision making for diffusing organisational strategy involves governance and it is carried out through governance. Governance encompasses plans, which include standards, policies and principles. These elements of governance are carried out through processes. As shown in Figure 2 above, the elements of governance manifest themselves, are enabled and influence transformation, awareness and collaboration.

Technologies are diffused through transformation to achieve organisational strategy. However, for that to happen, awareness of technologies and other factors, such as people and processes are also required. People should adhere to these rules, policies and regulations.

In order for people to adhere to these elements, they must understand the organisational culture and support it. As mentioned before, organisational culture cannot be built in one day; it is a process that involves a depth of understanding of the organisation and awareness of employee's behaviour and beliefs. It is beneficial when people are aware of their organisational culture, because awareness ignites how, when and where technologies are diffused to enable and support organisational strategy, over time and space.

Both transformation and awareness require collaboration and ensure the inclusiveness of stakeholders in the diffusion of organisational strategy through technology artefacts. When rules and procedures of the business are being followed and applied properly, transformation progresses smoothly. Transformation introduces new ideas that help in the smooth operation of the business because through these new ideas, better systems will be installed or old systems will be enhanced. However, this cannot happen if everyone involved does not co-operate. Without collaboration there will be exclusive behaviour in attempting to execute the strategy; this impacts negatively, as employees and other stakeholders become resistant to change.

7. CONCLUSION

This article can be viewed from three perspectives: (i) revealing the significance of IT decisions in diffusing organisational strategy; (ii) presenting the factors that influence and shape the diffusion of organisational strategy through IT decisions; and (iii) presenting an IT decision-making framework for diffusing organisational strategy. These perspectives are of value and of interest to both practitioners and academics in their practical and theoretical nature.

The article contributes to how practitioners' carry out their processes and activities relating to organisational strategy through better understanding. Apart from revealing the factors, it shows how the factors through which decisions are made using IT interrelate and connect. From theoretical perspectives, it will be of interest to many academics how DOI was employed in the study, to gain better understanding of how IT decision making can be used to diffuse organisational strategy.

REFERENCES

ADEOSUN OO, ADEOSUN TH, ADETUNDE IA & ADAGUNODO ER. 2008. Strategic application of information and communication technology for effective service delivery in banking industry. ICCEE *Computer and Electrical Engineering, December 2008*. International Conference pp. 135-140.

ALQAHTANI S & WAMBA S F. 2012. Determine of RFID technology adoption Intention in the Saudi retail industry: an empirical study. IEEE 45th *Hawaii International Conference on System Science* pp. 4720-4729.

AMABILE T & KRAMER S. 2012. To give your employees meaning, start with mission from HBR blog network [Internet: https://hbr.org/2012/12/to-give-your-employees-meaning.html; downloaded on 2016-10-04.]

BENSON RJ, BUGNITZ TL & WALTON WB. 2004. Business strategy to IT action. New York, NY: Wiley.

BOSSIDY L, CHARAN R & BURCK C. 2011. Execution: the discipline of getting things done. New York, NY: Random House.

CHEN Y, WANG Y, NEVO S, JIN J, WANG L & CHOW WS. 2014. IT capability and organizational performance: the roles of business process agility and environmental factors. *European Journal of Information Systems* 23(3):326-342.

CHRISTENSEN C. 2013. The innovator's dilemma: when new technologies cause great firms to fail. New York, NY: New York Press.

COMER JS & KENDALL PC. 2013. The Oxford handbook of research strategies for clinical psychology. London, UK: Oxford University Press.

COURTNEY H. 2003. Decision-driven scenarios for assessing four levels of uncertainty. *Strategy & Leadership* 31(1):14-22.

DEB S. 2014. Information technology, its impact on society and its future. *Advances in Computing* 4(1):25-29.

DINGFELDER HE & MANDELL DS. 2011. Bridging the research-to-practice gap in autism intervention: an application of diffusion of innovation theory. *Journal of Autism and Developmental Disorders* 41(5):597-609.

FAIRHOLM MR. 2009. Leadership and organizational strategy. *The Innovation Journal: The Public Sector Innovation Journal* 14(1):1-16.

GHOBAKHLOO M, HONG TS, SABOURI MS & ZULKIFLI N. 2012. Strategies for successful information technology adoption in small and medium-sized enterprises. *Information* 3(1):36-67.

GRANT RM. 2016. Contemporary strategy analysis: text and cases edition. 9th ed. West Sussex, UK: Wiley.

GOVENDER NM & PRETORIUS M. 2015. A critical analysis of information and communications technology adoption: the strategy-as-practice perspective. *Acta Commercii* 15(1):1-13.

HOUGH J, STRICKLAND AJ, GAMBLE J & THOMPSON A. 2011. Crafting and executing strategy: creating sustainable high performance in South African businesses: [text, readings and cases]. Berkshire, UK: McGraw-Hill Higher Education.

IYAMU T & ROODE D. 2012. The use of structuration theory and actor network theory for analysis: case study of a financial institution in South Africa. *International Journal of Actor-Network Theory and Technological Innovation (IJANTTI)* 2(1): 1-17

LIU G, SONG YF & QIAN C. 2008. User acceptance of internet banking: an empirical study in Hong Kong. *Decision Support Systems 42*(3):1558-1572.

MARINČ M. 2013. Banks and information technology: marketability vs. relationships. *Electronic Commerce Research* 13(1):71-101.

MOLLOY S & SCHWENK CR. 1995. The effects of information technology on strategic decision making. *Journal of Management Studies* 32(3):283-311.

MUA K. 2016. Moving from strategy to corporate communication. [Internet https://ssrn.com/abstract=2818848; downloaded on 2016-08-05.]

NDUATI PN. 2014. Strategy implementation at Kenya accountants and secretaries national examinations board. Nairobi, Kenya: University of Nairobi. (Doctoral dissertation.)

NEMUTANZHELA P & IYAMU T. 2015. Theory of diffusion of innovation for analysis in information systems studies. *Science and Information Conference* (SAI) pp. 603-608.

OLIVEIRA T & MARTINS MF. 2010. Information technology adoption models at firm level: review of literature. *European Conference on Information Management and Evaluation* pp. 312.

OLUWATOLANI L, JOSHUA A & PHILIP A. 2011. The impact of information technology in Nigeria's banking industry. *Journal of Computer Science and Engineering* 7(2):63-67.

OON C & SOROOSHIAN S. 2013. Mini literature analysis on information technology definition. *Information and Knowledge Management Journal* 3(2):139-149.

RHODES J. 2009. Using actor-network theory to trace an ICT (telecenter) implementation trajectory in an African women's micro-enterprise development organization. *Information Technologies and International Development* 5(3):1-20.

ROGERS EM. 2003. Diffusion of innovation. 5th ed. New York, NY: Free Press.

RUSSELL DM & HOAG AM. 2004. People and information technology in the supply chain: social and organizational influences on adoption. *International Journal of Physical Distribution & Logistics Management* 34(2):102-122.

SAHIN I. 2006. Detailed review of Rogers' diffusion of innovations theory and educational technology-related studies based on Rogers' theory. *The Turkish Online Journal of Educational Technology* 5(2):14-23.

SAMPAIO L, VARJAO J, PIRES EJS & DE MOURA OLIVEIRA PB. 2012. Diffusion of innovation in organizations: simulation using evolutionary computation. IEEE *Fourth World Congress on Nature and Biologically Inspired Computing (NaBIC)* pp. 25-30.

SANG H & TSAI D. 2009. Analysing strategies of integrating ICT into teaching activities using innovation diffusion theory. IEEE *INC, IMS and IDC, 2009. NCM '09. Fifth International Joint Conference* pp. 1876-1878.

SOUSA FILHO JMD, WANDERLEY LSO, GÓMEZ CP & FARACHE F. 2010. Strategic corporate social responsibility management for competitive advantage. *BAR-Brazilian Administration Review* 7(3):294-309.

SRIVASTAVA M, FRANKLIN A & MARTINETTE L. 2013. Building a sustainable competitive advantage. *Journal of Technology Management & Innovation* 8(2):47-60.

STRAUB ET. 2009. Understanding technology adoption: theory and future directions for informal learning. *Review of Educational Research* 79(2):625-649.

SULLIVAN J. 2011. Increasing employee productivity the strategic role that HR essentially ignores. [Internet: https://www.eremedia.com/ere/increasing-employee-productivity-the-strategic-role-that-hr-essentially-ignores/; downloaded on 2016-10-24.]

THOMPSON AA & STRICKLAND AJ. 2003. Strategic management: concepts and cases. 13th ed. New York, NY: McGraw-Hill.

THOMPSON AA, PETERAF MA, GAMBLE JE & STRICKLAND III AJ. 2012. Crafting and executing strategy: the quest for competitive advantage: concepts and cases. 18th ed. New York, NY: McGraw-Hill Education.

TIMPKA T, BANG M, DELBANCO T & WALKER J. 2007. Information infrastructure for inter-organizational mental health services: an actor network theory analysis of psychiatric rehabilitation. *Journal of Biomedical Informatics* 40(4):429-437.

TRAN O & TIAN Y. 2013. Organizational structure: influencing factors and impact on a firm. *American Journal of Industrial and Business Management* 2013(3):229-236.

WALTON J. 2013. The obligatory passage point: abstracting the meaning in tacit knowledge. In: Janiūnaitė B, Pundziene A & Petraite M (eds.) *Proceedings of the 14th European Conference on Knowledge Management* pp. 769-775.

ZHANG X, YU P, YAN J & SPIL ITA. 2015. Using diffusion of innovation theory to understand the factors impacting patient acceptance and use of consumer e-health innovations: a case study in a primary care clinic. *BMC Health Services Research* 15(71):1-15.