INFLUENCE OF TECHNOLOGY AS A STRATEGIC RESOURCE ON PERFORMANCE OF INSURANCE COMPANIES IN KENYA. A CASE OF AAR INSURANCE KENYA LIMITED

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INFLUENCE OF TECHNOLOGY AS A STRATEGIC RESOURCE ON PERFORMANCE OF INSURANCE COMPANIES IN KENYA. A CASE OF AAR INSURANCE KENYA LIMITED

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ABSTRACT
The purpose of the study was to establish the influence of technology as a strategic resource on performance of insurance companies, focusing on AAR insurance Kenya limited. The study was grounded on strategic choice theory, the resource based theory, diffusion theory and open systems theory. A descriptive research cross sectional survey design was used in this study. The total target population was 221 management staff of AAR insurance Kenya limited. A sample population of 140 was arrived at by calculating the target population of 221 with a 95% confidence level and an error of 0.05 using the below formula taken from Kothari (2004). The study selected the respondents using stratified proportionate random sampling technique. Primary data was obtained using self-administered questionnaires. The drop and pick method was preferred for questionnaire administration so as to give respondents enough time to give well thought out responses. After data cleaning which entailed checking for errors in entry, descriptive statistics such as frequencies, percentages, mean score and standard deviation was estimated for all the quantitative variables and information presented inform of tables. The qualitative data from the open-ended questions was analyzed using conceptual content analysis and presented in prose. The study found that technology in underwriting operations, technology in provider management, technology in claims management and technology in customer service operations affects performance of AAR insurance Kenya limited greatly. The study concluded that underwriting operations had the greatest effect on performance of AAR insurance Kenya limited followed by technology in claims management then technology in customer service operations in while technology in provider management had the least effect on performance of AAR insurance Kenya limited. The study recommends that the insurance companies should invest more in modern underwriting technology and data environments, that the insurance companies should come up with technologies that will be able to address the needs of the organization and that the management of insurance companies should advocate transparency when executing the firm projects.

Key Words: *Technology, Underwriting Operations, Provider Management, Claims Management*

INTRODUCTION

For most companies, strong technological competence will be a key competitiveness factor in the future. Technology-based companies that rely substantially on innovation through exploitation of emerging technologies for development of new products and services possess the characteristics of knowledge-intensive organizations. The business performance of these technology-based companies is driven by specific internal and external resources, which are composed of intangible assets and technological infrastructure to enhance unique core competence. A variety of breakthrough technologies are set to spur a fundamental transformation of the insurance industry (IIF, 2016). However, with regard to whether the technologies affect changes in the performance as desired by management and as need to remain competitive in the marketplace, remain unclear (Baumann, 2016).

The users/managers/designers had to limit themselves to the informal feedback of users, and often relied upon requests for adjustment to assess the utilization of the systems.Organizations possessing advanced technologies, knowledge, and competencies will perform significantly better and have higher innovative abilities compared with firms that lag in technology (Gheysari et al., 2016).). Since technology acquisition enables firms to stay abreast with technology developments with less time and costs incurred, firms are able to develop their technological capabilities and sustain performance in dynamic markets (Keegan et al., 2015).

Technology is one of the central and most significant elements related to effective operations management in an organization. It can be defined as a body of knowledge used to create tools, develop skills, and extract or collect materials. It is also the application of science (the combination of the scientific method and material) to meet an objective or solve a problem. Technology can be defined as the application of knowledge to perform work or the theoretical and practical knowledge, skills, and artefacts that can be used to develop products as well as their production and delivery system. A more comprehensive definition of technology is the practical implementation of learning and knowledge by individuals and organizations to aid human endeavour (Desjardins, 2015).

To achieve the desired level of customer service delivery, a company may consider a lot of ways, which can lead it to better serving the customer. Insurance companies, as part of the services industry, trying to define the boundary of their competitive area, must take into consideration the large number of competitors, the old ones, other insurance companies, and the new ones brokerage companies and banks. In these circumstances, creation of the competitive advantage is considered a very difficult job (Dahad, 2015). In insurance environment, the industry must not only focus its strategic attention on areas from better financial and risk-pool management but also develop innovative, growth-oriented products that can secure the loyalty of existing customers and attract new ones. The adoption of ICT among the insurance companies has become a necessity, taking in consideration the need of faster insurance operation, faster processing of customer claims and companies liabilities (Mensah, 2016).

The insurance industry in Kenya has become very competitive due to the shrinking demand of non-compulsory insurance products and negative perception by the general public. The penetration levels are estimated at 3.02% which is very low compared to the developed countries (AKI, 2015). In an effort to improve the performance of insurance companies, managers formulate and implement various strategies. Many managers in the industry know their businesses and the strategies required for success but they struggle to translate these theories into action plans for

successful implementation of strategies (Wahome, 2015).

The statute regulating the industry is the insurance Act; Laws of Kenya, Chapter 487. The office of the commissioner of insurance was established under its provisions to strengthen the government regulation under the Ministry of Finance. There is also self-regulation of insurance by the Association of Kenya Insurers (AKI). The professional body of the industry is the Insurance Institute of Kenya (IIK), which deals mainly with training and professional education. Recently there was formed the Insurance Regulatory Authority (IRA) mandated to supervise and regulate the insurance industry players. There were 197 licensed insurance brokers during the year. The gross premium written by the industry was KShs 41.68 billion compared to KShs 36.42 billion in 2005 representing a growth of 14.54%. The gross premium from general insurance was KShs 29.20 billion while life business premiums and pensions contributions amounted to KShs 12.48 billion. The gross profit before tax rose from KShs 4.32 billion in 2005 to KShs 5.80 billion in 2006 representing a growth of 35% (AKI, 2016).

Statement of the Problem

Kenya's Insurance sector remains dynamic, resilient and due to stiff competition in the insurance sector, there are transformational changes on the horizon that are putting existing insurance business models at risk, this is due to unsuitable strategic management practices. The insurers that adapt will hone their risk management capabilities, focus keenly on the customer, build their analytical capability, and have a superior capacity for innovation and reinvention, while at the same time maintaining their focus on all relevant financial reporting and compliance related developments (PWC, 2015).

In the past two decades, over eight insurance companies namely Kenya National, Blue Shield, Access, Stallion, Lakestar, Liberty and United Assurance have collapsed or been put under statutory management (Policyholders Compensation Fund, 2013). Some of these companies like Kenya National, Blue Shield and Lakestar had previously been deemed profitable based on their financial reports. Insurance is one of the most under-developed sectors of the Kenyan economy commanding a mere 2.93% penetration. The figures are even lower for life insurance at below 1.06% (Association of Kenya Insurers, 2014). The Kenyan insurance market experienced a lower growth rate during the 2016 first quarter under review compared to that recorded in the first quarter of 2015. Insurance premiums during the first quarter of 2016 registered a year-on-year growth of 9.6% while a 16.4% year-on-year growth was registered in the first quarter of 2015 (IRA, 2016).

The insurance industry in Kenya has had a low growth and very slow uptake. Insurance regulatory authority annual figures have shown growth in the industry but the uptake of insurance in the market has remained relatively low at below 3%. The medical insurance industry has become very competitive with many insurance players hitherto not offering medical insurance jumping into the fray. With this reality AAR Insurance Kenya Limited had to come up with sound strategies to sustain and consolidate its lead in this market and therefore the need to adopt balance score card to implement strategy and measure performance (AKI, 2016).

Locally various researchers have reviewed the importance of technology on company performance. Letting (2016) studied the relationship between technology and competitive advantage the case of vegetables and animal oils and fats manufacturers in Kenya; Waruingi, (2015) conducted a survey of the extent of information communication technology strategy to business strategy for companies quoted at the NSE; Maina (2015) researched on the relationship between technology strategy and competitive performance in the telephony industry in Kenya; Ombati (2015)

did a survey on the relationship between technology & service quality in the banking industry in Kenya while Maringa (2015) established the relationship between investment in information communication technology and corporate performance at Kenya Revenue Authority. Literature reviewed from previous studies clearly indicates that researchers have not exhaustively captured the relationship that exists between technologies as a strategic resource on performance of insurance companies in Kenya. It is therefore against this background that this research study sought to assess the influence of technology in underwriting operations, technology in provider management, technology in claims management, and technology in customer service operations on the performance of AAR insurance Kenya limited.

Research Objectives

The general objective of the study was to establish the influence of technology as a strategic resource on performance of insurance companies, focusing on AAR insurance Kenya limited. The specific objectives were:-

- To determine the influence of technology in underwriting operations on performance of AAR insurance Kenya limited.
- To examine the influence of technology in provider management on performance of AAR insurance Kenya limited.
- To establish the influence of technology in claims management on performance of AAR insurance Kenya limited.
- To assess the influence of technology in customer service operations on performance of AAR insurance Kenya limited.

LITERATURE REVIEW

Theoretical Review

Strategic Choice Theory

Strategic choice theory was postulated by Smith in 1999 and collaborates. The early empirical studies on the relationship between organizational structure and situational factors such as technology by Blau, Hage and Aiken, Hal, Lawrence, and Lorsch in the United States and Pugh and Woodward in Britain provided material for development of models that helped the Strategic choice theory (SCT) to advance (Gheysari et al., 2016). According to these models, the goal of the organizations is to achieve high performance standards and increase the efficiency to the limits of economic constraints. In these studies, little attention was paid to situational (contextual) factors for example, environment, technology, and scale of operation and the agency of choice any agent in the organization who has the power to direct the organization, e.g. managers (Adewoye & Akanbi, 2015).

Strategic decisions in organizations have significant effects on organizational outcomes. Strategic choice theory, according to Child's perspective is less concerned with the functional operation of the organization and has more to do with the governance structure and political actions in organizations. Strategic choice emphasizes the importance of establishment of structural forms, the manipulation of environmental features, and the choice of relevant performance standards in achieving organizational goals. According to the, managers play an important role in achieving organizational outcomes through their decision making or leading the changes in organizations (Gheysari et al., 2016). This strategic decision making functions at three levels: Top tier or long term planning, middle tier or functional level, and bottom tier at the individual level. Strategic choice theory views managers as proactive agents who are down-stream decision-makers and mainly focus on directing major decisions and change processes in organizations. Change, or what Koskinen (2015) calls variation in organizational structure, is caused by three contextual factors: environmental conditions, technology, and size.

Dynamic Capability Theory

The DCT was initially introduced by David Teece and Gary Pisano in 1994. According to (D. J. Teece & Pisano, 1994, p. 515), in the past successful companies pursued a "resource-based strategy of accumulating valuable technological assets, often reserved by a defensive approach towards intellectual property". This "resource based strategy" was grounded on the ideas of the "Resource Based View" which attempted to explain that the source of competitive advantage lies within a company's ability to manage internal resources(Das & Teng, 2000, p. 32). The argument is that because some resources can be specific to firms and are not easily imitated, firms differ in terms of their resource base. This inimitability is essentially what leads to competitive advantage (Das & Teng, 2000, p. 32). At the heart of the RBV are the VRIN variables. The main principle is that an organization is seen as a collection of resources that are simultaneously valuable, rare, imperfectly imitable and non-substitutable, these variables essentially enable the company to reap superior rents (Bowman & Ambrosini, 2003, p. 291). In this context, the resource based view focuses on the unique internal resources within firms and exploiting firm specific assets to achieve competitive advantage (D. J. Teece, Pisano, & Shuen, 1997, p. 514). Although the resource based view is considered an influential management theory it has been criticized to be conceptually vague and redundant, with limited focus on the mechanisms by which resources actually contribute to competitive advantage (Eisenhardt & Martin, 2000, p. 1106). This is supported by D. J. Teece and Pisano (1994, p. 538) who argued that the foundation of the resource based view is not capable of supporting sustained competitive advantage. While the resource based view recognizes the mechanisms that enable competitive advantage, it does not attempt to explain how these mechanisms operate (D. J. Teece et al., 1997, p. 510). Instead it was proposed that competitive advantage would be attributed to those companies that were able react rapidly and flexibly to product innovation, while simultaneously possessing the capacity to manage firm specific capabilities in such a way as to effectively coordinate and redeploy internal and external competences (D. J. Teece et al., 1997, p. 515). This ability to achieve new forms of competitive advantage by being flexible and fast in dealing with changing market environments is what D. J. Teece and Pisano (1994, p. 552) referred to as "DC's". The DCT expands on two fundamental issues that were not discussed in other strategy approaches, such as the resource based view; the first being the firm's ability to renew competences so as to adapt to changes in the business environment and the second being the ability of strategic management to use these competences to match the requirements of the environment (D. J. Teece et al., 1997, p. 515). Thus due to the fact that the resource based view has not been able to adequately explain how and why certain firms have competitive advantage in situations of rapid and unpredictable change (Eisenhardt & Martin, 2000, p. 1106) in which DC's become the source of sustained competitive advantage (D. J. Teece et al., 1997, p. 511), the DC's approach is proposed.

The Resource Based Theory

The Resource Based Theory was developed by Barney, 1991. This theory is predominantly used to analyze strategic resources that are available to an entity. Resources include all assets, capabilities, processes, attributes of an entity, information and knowledge that are controlled by an entity and which enable them to conceive of, and implement strategies that improve efficiency and effectiveness. Resources are either property-based or knowledge-based (Wiklund & Shepherd, 2003). In this respect, property-based resources are tradable and non-specific to an entity while knowledge-based resources are the ways in which an entity combines and transforms tangible input resources.

Therefore, knowledge-based resources may be important in providing sustainable competitive advantage. Age and education are two common sources of knowledge-based resources, which influence access to bank credit (Zeller, 2015). Other, sources of knowledge-based resources that have the potential to influence access to bank credit include family business history, entrepreneurial experience, industry specific know-how, training and social capital. The fundamental principle of the resource-based theory is that the basis for a competitive advantage of an entity lies primarily in the application of the bundle of valuable resources at the individual's disposal. This requires resources to be heterogeneous in nature and not perfectly mobile (Barney, 1991).

It also means that valuable resources should neither be perfectly imitable nor substitutable without great effort. If these conditions hold, the entities bundle of resources can assist the firm to have unique dispositions that lead to superior outcomes. The important lesson of the resource-based theory in smallholder business finance is that it allows the identification of the resources associated with successful and unsuccessful access to bank credit. Further, it provides adequate logic or explanations underlying key propositions. It also helps to identify the type of relationships between its key concepts; thus allowing for a comprehensive and integrated framework that can be used to identify effective interventions; and therefore useful in addressing technology in customer service, because they are important to the success of the insurance companies (Gheysari et al., 2016).

Diffusion Theory

Diffusion of Innovation Theory was discovered by Rogers in 1962 expounds how an idea can be communicated over time and spreads through the population or social system. Diffusion can be described as the process which innovation spreads and is accepted in the society. Many factors interact to influence the spread or diffusion of technology (Rogers, 1995). It involves communicating the idea, the time it takes to spread and the nature of the society in which it's introduced. It goes farther to expound and investigate how the various factors interact, facilitate the new innovation and the effects of the invention. This inculcates a culture in people and adopts the idea or product over time. Over the years diffusion theory has been used extensively both in technology and economics. More theories have been derived out of diffusion to explain spread of various innovations in the society. In Information technology, the use of developer based theory and adopter based theory (Surry, 1997).

Further Rodgers explains the adoption using the rate of adoption theory that defines how innovations diffuse to form a pattern that is S shaped curve. It identifies how the idea follows a path from inception at a slow gradual growth before exploding into rapid growth (Rogers, 1995). Diffusion theory is further supported by theory of perceived attributes that explains the potential of innovation adopter's judge based on five attributes of invention. They comprise of relative advantage, compatibility, observability, complexity and lastly triability. Surry supports this perception which plays a major role in the adoption of technologies in the society (Gheysari et al., 2016). This theory is relevant to this study in understanding technology in underwriting operation and performance of insurance companies.

Open Systems Theory

Open system theory was developed by Ludwig von Bertanlanffy (1956), a biologist, but it was immediately applicable across all disciplines (Scott, 2013). Open system perspectives see organizations both as hierarchical systems and as loosely coupled systems. Open systems tend to have some semblance of clustering and levels.

The open systems theory assumes that all large organizations are comprised of multiple subsystems, each of which receives inputs from other subsystems and turns them into outputs for use by other subsystems (Hatch, 1997). The subsystems are not necessarily represented by departments in an organization, but might instead resemble patterns of activity. Interdependencies and connections within a subsystem tend to be tighter than between subsystems. These "stable sub-assemblies" give a distinct survival advantage to the entire system (Gortner, Mahler & Nicholson, 2014).

Open systems reflects the belief that all organizations are unique in part because of the unique environment in which they operate and that they should be structured to accommodate unique problems and opportunities (Baumann, 2016). Environmental influences that affect open systems can be described as either specific or general. The specific environment refers to the network of suppliers, distributors, government agencies, and competitors with which a business enterprise interacts. The general environment encompasses four influences that emanate from the geographic area in which the organization operates. The open-systems theory assumes that all large organizations are comprised of multiple subsystems, each of which receives inputs from other subsystems and turns them into outputs for use by other subsystems. The subsystems are not necessarily represented by departments in an organization, but might instead resemble patterns of activity (Baumann, 2016). This theory holds that in order for the organization to achieve its objectives and goals, it is important that it operates as an open system where it takes care of the environment in its decision making process because failure to do this may lead to failure to deliver on organizational objectives. Therefore, this theory is relevant to this study in explaining the technology in claim management.

Conceptual Framework

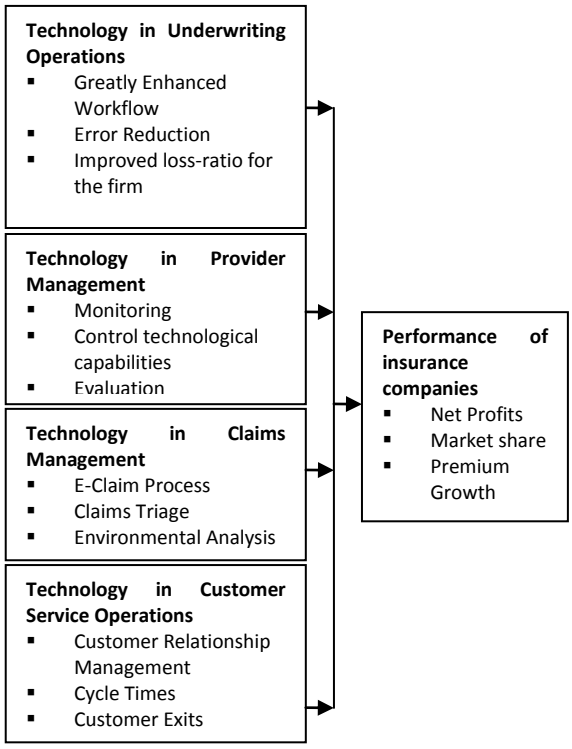

Figure 1: Conceptual Framework

Technology in Underwriting Operations

The organization and technology justifications for investing in advanced underwriting technology are plentiful. In fact, insurers are investing in modern underwriting technology and data environments as a foundational layer for business transformation. It is increasingly possible to make smarter, more informed risk evaluation decisions by using responsive, dedicated underwriting workstations that are connected to new sources of data and predictive models (IIF, 2016).. Insurance underwriting is the process of evaluating the risk(s) of a property (such as in home or car insurance), a situation or an individual (such as in life insurance) to determine if it is profitable for the insurance company to take on the risk and accept responsibility on behalf of the insurance company by means of providing insurance for a set price (the insurance premium charged for the risk). An insurance underwriter chooses who and what the insurance

company will insure based on a risk assessment. Underwriting is the behind the scenes work in an insurance company. Insurance underwriting also involves choosing who or what the insurance company will not insure (Baumann, 2016).

Due to processing inefficiencies, today's underwriters struggle to maximize profit (KPMG, 2016). The study conducted by KPMG considered 47 insurance companies in Kenya, to better gauge efficiency in underwriting departments. Results concluded that due to processing inefficiencies, 82 percent of underwriters spend a maximum of half their time on underwriting. Over half of underwriters work with four or more systems in the underwriting process and many spend the bulk of their time on tasks unrelated to underwriting. Three-quarter of insurers surveyed mentioned underwriting as a top business priority. A further 20 percent said it was a moderate focus and 5 percent said it was unimportant. Despite these claims, underwriting often takes a backseat to other less profitable tasks. 41 percent of respondents estimated they spend 10 percent to 25 percent of time on underwriting; another 41 percent claimed it takes up 26 to 50 percent of their time. 18 percent of respondents spend over half their time on underwriting (Dahad, 2015).

According to Hunn (2015), technology is driving rapid changes in insurance underwriting across the property/casualty and life/annuity segments. But while most insurers are embracing more efficient underwriting processes, few are aggressively exploring the revolutionary possibilities that new data sources and analytical capabilities herald. Some of the common underwriting strategies that directly affect service delivery are discussed below. Sarich (2015) argues that commercial underwriting is very low-tech– files and documents are complex, cumbersome and highly paper oriented. While Association for Cooperative Operations Research and Development (ACORD) standards provides upload capability, there is very little that an agency can upload in terms of forms, Occupational Safety and Health Administration (OSHA) reports, loss control reports, workers' compensation loss reports, vehicle schedules and so forth. For most new and renewal submissions, the improvements in technology haven't changed the way commercial insurance agencies operate compared to 10 or 15 years ago. Most continue to use paper-based processes. Going paperless involves deploying technology to simplify and transform among others day-to-day underwriting business operations and enables an underwriter to increase productivity and serve the customers even better (Baumann, 2016).

The greatest Return on Investment (ROI) out of all technology investments today is an Automated Underwriting Solution (AUS). AUS do exactly what they sound like; automate the process of underwriting taking much of the work done in manual process today into a "no touch" low cost environment (Desjardins, 2015). Typical manual underwriting tasks include; quoting, policy issuance, document management, reporting, message notifications, inquiry, policy modification, filing, mailing and cancellation. Increased automation benefits customers, brokers, insurers and reinsurers. Not only can the delivery of insurance products be real-time fast, but the customer experience can be greatly enhanced (Hunn, 2015).

Survey conducted by Klynveld, Peat Marwick, and Geordeler – United Kingdom (KPMG-UK) (2015) reveals that 70% of the customers develop an opinion of insurers customer service satisfaction based on the underwriting experience. Of the 70%, 50% were keen on the speed of underwriting while 20% were more interested in the extent of paper work required during the onboarding process. Some of the benefits of automated underwriting solutions that improve the customer service delivery include: Typical interaction between underwriter and insurance broker, in a

non-automated environment, includes multiple and repeated data entry at every level, frequent communication back and forth, even before any sale is made, paper and more paper (Rao, 2015). Automating the process from broker through underwriter asks the appropriate set of questions, allows for supplementary if required, routes the request (quote, renewal, policy change) efficiently through the right process. In the example of a new business request, it will give an instant indication which can either give permission to issue the policy, an opportunity to submit supplemental for an updated indication and permission to issue or to be submitted to an underwriter for further scrutiny or an immediate decline (Dahad, 2015).

If an insurance broker can offer clients an instantaneous way to obtain an insurance quote and then in most circumstances, allow the broker to issue a correct policy document. This is the kind of service that is standard in most other industries (Gheysari et al., 2016).). By having one data set shared between underwriter and broker and well-designed interfaces and underwriting question sets, virtually eliminates any non-human error. In a non-automated environment the intervention required by many, each with their own system greatly increases the opportunity for error resulting in a much greater workload. The reduced error rate reduces the amount of time taken to underwrite a policy resulting to significantly reduce underwriting process (Grand View Research, 2016).

Modern technology literally allows a completely paperless underwriting process. This, in turn, means no more paper handling or mailing. Information is instantly available at your fingertips on any wireless device (IIF, 2016). By eliminating many sources of error and improving workflow to allow for underwriting intervention the process becomes a decision making process rather than a "paper pushing" process. Underwriting rates and rules are followed; authority levels are adhered to through the orchestration engine (Malit, 2017).

Technology in Provider Management

Technology increases the prospect for conducting business in more efficient and competitive ways that are methodically different from the past. Every organization uses different form of technology for their business which has a basic and critical effect on the nature, design, structure and work of an organization. In an organization departments and division are developed around the equipment used whether it is for production, communication, information or control. Management of technology as the name suggests is not only limited to technology but touches on aspects of management and should therefore be systematic and strategic (Baumann, 2016). Management of technology is defined as the linking of different disciplines to plan, develop, implement, monitor, and control technological capabilities to shape and accomplish the strategic objectives of an organisation (Hunn, 2015). Management of technology is a process that can be broken down to several critical areas that come together to achieve a certain end. It involves aspects such as environmental analysis to determine both the latest technologies available in the market and characteristics of the environment and the fit of these technologies to those particular environments - assessment of technologies and their capabilities vis-à-vis the organizational needs (Desjardins, 2015).

The question at this point is whether the technologies will be able to address the needs of the organization. Another aspect that is also addressed is the selecting of suitable technologies against the backdrop of the cost of the technology. It also takes a look at the evaluation and control which involves monitoring of technology to ensure it meets desired outcomes in terms of the goals and objectives it was meant to address. In this section the study delved into some of these aspects in order to get a better

understanding of the management of technology process and its importance (IIF, 2016).

One major factor that influences the change of the business environment is technology. Technological changes or developments in a particular industry will affect the firms in that particular industry in different ways (Trott, 2015). For example the introduction of new technologies that make the manufacturing of a product much easier and faster will definitely change the landscape of that particular industry. Organisations that take advantage of this new technology early will be able to compete more favourably and will achieve greater success as opposed to those that are not in a position to do so. Additionally technological developments from the angle of the other players in the market could affect the organisations in a particular industry and therefore they should be in a position to respond to these changes (White & Bruton, 2015).

Changes in the environment could also present an opportunity to the organisation in terms of developing technologies or adopting technologies that give them a competitive advantage in the industry (Dahad, 2015). This dynamism of the environment is a challenge that organisations must address and keep track of as part of management of technology. This serves to highlight how important keeping track of the environment is. Management must therefore put in place measures to constantly keep track of the environment and keep them informed about any changes in order to effect the management of technology better (IIF, 2016). This will also serve to inform them during the strategy formulation process that is linked to the success of the organisation. Assessment of technologies and their capabilities is also an important activity of the management of technology (Baumann, 2016). Through this action, management will be well informed about various technologies in the industry and their capabilities. This assessment is compared to the needs of the organisation and the environment. A technology fit is then sought between the technology and its capabilities, the business needs and the environment it is supposed to operate in (Phaal & Palmer, 2010). The result of this process is a short list of technologies that can be developed or adopted by an organisation from which a selection is made based on other factors with availability of funds being one of the most important (Grand View Research, 2016).

With environmental analysis and assessment of technologies done, selection of the most suitable technology takes place. This is followed by its implementation soon after in order to realise the benefits of the selected technology. Implementation should be done systematically and completely in order to experience the benefits of the new technology (Tassey, 2016). This involves monitoring the technology to ensure it meets the desired outcomes. It is a very important activity when it comes to management of technology. The organisation must monitor the technology after implementation in order to keep track of whether the intended benefits are being derived from the technology. Additionally, monitoring must take place in order to keep track of any changes that may render the technology ineffective, obsolete or even competitively weak (Phaal & Palmer, 2017).

Technology in Claims Management

Organisations have invested in technology to facilitate their operations. For some organisations, technology is at the core of their business and is constantly innovating to meet the needs of their customers. In other organisations, technology is simply an enabler or support function to assist in the achievement of the company's goals and objectives. Whichever the case, it is important to understand the extent to which strategy and technology influence each other in order for the strategists to ensure the success of the organization. A claim is a request made by the insured individual or a corporate to the insurer for

the payment of benefits under a certain policy (Asokere & Nwankwo, 2015). However, to reduce the cost of claims and deliver on a value-added brand promise to customers, insurance companies are focusing on enhancing efficiency and effectiveness of service delivery in claims function. Claims processing is the gateway to the customer that will drive improvement in the insurers' customer acquisition, retention, enterprise business intelligence for product development insight sand profitability for the next several years (Gheysari et al., 2016). The speed, accuracy and effectiveness of claims processing is also paramount for controlling costs, managing risks and meeting portfolio underwriting expectations (IIF, 2016).

Most of the insurance policy holders have experienced the frustration of dealing with insurance contact centers when all too often, claims fall through the cracks, resulting in unexpected expenses. Not only are costs incurred by these companies to compensate for these operational inefficiencies, but there is also the annoyance and embarrassment of having to explain to suppliers why these claims have not been paid. The end result, Poor customer service and operational risk issues, often with legal implications. But all is not lost and these challenges can be avoided (Desjardins, 2015). Claim settlement process need to be as per requirement of the customers, so that at the time of need, no customer should be suffered due complexity of the claim settlement process. Faster claim settlement process reduces the cost of processing any claim whereas multiple stages in the process should be avoided since it increases the cost of claim settlement. 80% of policy holder's rank the customer service delivery for insurance companies based the effectiveness of the claims process. Some of the strategies under claims management that can be adopted to greatly enhance the customer service delivery include:

Insurance companies in Kenya are under extreme pressure to keep up with the growing demand for better customer service delivery during the claims process, with vital information embedded in faxes, emails, handwritten notes and phone calls that have pertinent information which need to be processed timeously. However, the fact is that these forms of data have traditionally been too big and too complex to collate. As a result, insurance companies haven't known what information to look for to effectively manage these data sources from a claims processing perspective (Ashturkar, 2015). For claims function, service delivery is concerned with the speed, accuracy and effectiveness of claims processing. This is also paramount for controlling costs, managing risks, meeting portfolio underwriting expectations, (IBM, 2015). The level of satisfaction of the service delivery affect competitive positioning, customer service, fraud management, risk exposure, cost control (TIBCO, 2015).

Whatever the type of insurance, and whether it is being bought by a corporation or a private individual, making a claim may be the most important contact a client has with the insurance company. How that claim is dealt with is likely to decide whether they stay with the company, whether they buy further products, and whether they are a true advocate for that company. Insurers need to meet the varying needs of both client and third parties whether claims are submitted on paper forms, online, by telephone or face to face (Yusuf & Ajemunigbohun, 2015). They are aiming to manage a claim as soon as it is submitted, and transfer it automatically through various processes right up to the moment when the client's incident has been resolved and the claim file is closed. This process can be controlled and monitored from start to finish with the appropriate business process management solution, only initiating human intervention where business requirements demand it. Important decisions remain in the insurance company's control, but good process management makes the

handling claims faster, more efficient and more reliable (IRA, 2015).

Oftentimes, loss situations awake the minds of the customer towards their insurer, as many consumers pay little attention to their insurance coverage until they have a loss. Claims, being the heartbeat of insurance, are the most critical contact the insuring public has with the industry and thus, critical moment of truth that shapes a customer's overall perception of their insurer (Baumann, 2016). Claims are the defining moment in the customer relationship for insurance firms, with a firm's success often defined by one factor: the customer's experience around claims, inefficiencies that are driving up claims costs and adversely affecting customers' claims experience. These inefficiencies include aging technology, increasing process complexity, and a rising number of fraudulent claims (Desjardins, 2015).

Claims Triage is designed to improve the decision-making process at First Notice of Loss. This eliminates assignment guesswork by defining questions and criteria around the status of the vehicle, enabling you to route the assignment to the best resource for timely and accurate completion (Hunn, 2015). Claims Triage helps identify total losses early in the claims process and initiate early tow, customize your scoring and thresholds to more accurately define the right resource for you, determine your preferred appraisal resources and specify the resources to send the assignment based on the evaluation results (IIF, 2016).

Technology in Customer Service Operations

Technology can influence an organisation and its processes in many different ways. The introduction of a new machine influenced how an organisation produces the products it sells, the introduction of new systems that process information and present it to managers to better direct the decisions they make influenced the decisions and eventual overall strategy of the organisation and also the introduction of a system that keeps tracks of customers and their needs influenced the marketing mix that an organisation puts together. These are just a few instances of how technology can influence an organisation, its processes and the strategies put in place to ensure the success of the organisation (Grand View Research, 2016).

According to Gartner (2015), CRM is a widely-implemented business strategy that focuses on customer segmentation to organize the customer-centric enterprises, and thus satisfy the customer needs and increase the revenues and profits. Burghard and Galimi have defined CRM further and added some new concepts in it. They thought CRM is a concept which focuses on customer needs and demands that re-design the enterprise and its information technology-driven business process, CRM combines a series of methods, software and Internet access capability with customer-oriented business strategy and aims to get the profits and achieve high customer satisfaction (Burghard & Galimi 2015).

Study conducted by Gheysari et al. (2016) revealed that Insurance Companies as an industry that needs to contact customers frequently should pay more attention to customer relationship. Currently, the existing problems in the implementation of company's CRM are obvious, so more and more insurance companies have realized the importance of customer relationship, but a perfect establishment of CRM also needs long-term efforts. The result of research for the implementation of insurance's CRM showed that insurance's CRM is not professional and a strategic CRM and especially lacks technical and systematic support that cannot achieve the desired results. So, for the majority of insurance companies, there should be a comprehensive CRM plan which is based on company's actuality to guide and improve it.

Today, in the business world, management recognizes that customers are the core business and the success of companies depends highly on customer relationship management. Customer relationship management can be implemented as a process of digitization of personnel's information about their customers (Dahad, 2015). When management of an organization, introduces itself as a customer-centric organization, it is necessary to develop capacities and capabilities to achieve the necessary resources, information and tools for facing the demands of customers and offer appropriate products and services (IIF, 2016).

With the acceleration of global economic integration process, the markets today have changed from the production and sales-oriented marketing to customer-oriented marketing. In this situation, the vital factor to enhance the corporation's competitive powers is customer relationship, like Peter Drucker1 said: The business of business is getting and keeping customers (Desjardins, 2015). High quality customer service and satisfaction will relate to corporation's revenues, profits and market share closely. Thus, facing a highly competitive environment, more and more corporations are realizing the importance of CRM (Baumann, 2016).

In attempt to improve customer service delivery, it has become difficult for the sales, marketing and service sectors of an enterprise to gain the requisite customer interaction information. In addition, the information from sales, customer service, marketing, manufacturing, inventory and other departments is scattered in the whole enterprise, and the scattered information cannot help the enterprise to get a full understanding about the customer situation (Hunn, 2015). Meanwhile each department cannot face the customer separately when the information has not been collected. Consequently, for most enterprises the best choice to solve these customer problems is finding an effective measure like collecting the customer information and activities from different departments, establishing a customer-centric enterprise and achieving a comprehensive customer management. All these situations are the demand base for CRM's emergence (Gheysari et al., 2016).

With the focus being placed more on the insured, there is a drive to ensure that Customers can access the enterprise and do business by telephone, fax, network and other technical ways, that all the employees who deal with customers can fully know the customer relationship, trade with the customers based on their demands, understand how to do the vertical and horizontal marketing with customers and record the customers' information (Romano & Fjermestad, 2015). They can track customer sales easily, make the planning and assessment for marketing activities and get the perspective for all aspects of the activities, can provide the information of cost, profit, productivity, risk and other useful factors to the enterprises, and make the multidimensional analysis in the customers, products, functions, geographic area and other aspects. The development of data warehousing, Business Intelligence, Knowledge Discovery and other technologies help the customer in the collection, collation, processing and utilization of information to achieve significant improvement (Hunn, 2015).

In this era of change and innovation, one step ahead the competitor could mean success, and a new management concept could help the enterprise to take the winning step (Greenberg, 2015). In the process of developing the management concept, with the evolution of the marketing environment and thinking, the concept has gone through five stages: product-oriented, sales-oriented period, profit-oriented period, marketing oriented period and customer-oriented period. With the arrival of customer-oriented period, more and more enterprises focus on

establishing a common victorious relationship with customers in order to achieve a win-win situation, rather than trying to gain all possible profit from their customers (IIF, 2016). Facing the update of the management concept, enterprises require a new systematic management process which focuses on customers; the new management also needs enterprises to synchronize their own business operation with the customer demands, make and implement the different mode of operation for different customers, to achieve and meet the real needs of every customer. Accordingly, CRM emerges as the demand (Zhang, 2015).

Within many insurance companies, there is a wealth of valuable information about individual customers; you know who they are and what insurance products and services they buy. You know their history of claims and the status of their accounts. You may even know about their opinions and preferences, or whether promotions have attracted their response. But can you unify all these fragments into a complete portrait of this most important asset: your customer? For insurance companies, "know thy customer" can be a challenging imperative. Customer data may be divided among product lines, or among legacy claims, policy and billing systems (Cheng, 2015). If an insurance company has expanded its customer base through mergers or acquisitions, its information may be even more fragmented. CRM in insurance starts with a single, complete, real-time enterprise view, so that call center representatives, agents and brokers can understand and serve every facet of individual customers. This level of holistic, personalized service can be the differentiating factor that retains good customers and reduces churn an important goal, given that customer retention is profitable and new customer acquisition can be expensive (Dahad, 2015).

Technology as a Strategic Resource on Performance of Insurance Companies

Organizations today are prolifically integrating new technologies to gain an edge over others in terms of productivity and services. With the help of technology there are remarkable changes in the processes like marketing, production, human development. Technology is useful in accurate decision making, time and money saving etc. and the same is based these days on scientific basis and analysis. Moreover, it has played a major role in conducting financial analysis and control. Although, there are several implications of technology, two implications have the most influence in organizations today. First one is the automation or new technology and the other one is information technology. New technology' or automation are not unanimous words rather they cover a wide range of tools, components and systems (Baumann, 2016).

Automation, technology or combination of both of these together is termed as high technology. Advances in communications technology enables organizations to benefit from the technical skills of employees around the globe. Modern production systems use computer based technology for integrating various aspects of manufacturing process in a better and improvised manner and also allow quick and cost efficient modifications of any product. Technology can be liberating in enabling people to work at times and in places of their own choosing. Technology also has enormous potential to transcend, geographical, cultural and temporal boundaries and so increase collaborations amongst organizations and their members (Cartwright, 2003). The knowledge may be shared and distributed with this turbulent technological change. The electronic media is responsible to reduce the social aspects of communication between the individuals working together. As the electronics has been invasive, useful and established therefore the earlier relationship between technology and employment may be

transformed. It is expected in future to have new establishment of organizational behavior, a new feature of work, new model of production of goods and services and a new style of employment (Grand View Research, 2016).

Performance management is crucial and a very important practice to the success of any business. Being a wide ranging topic, one can focus on target/goal setting, measurement, feedback or reward. Performance management has attracted the interest of scholars from a wide variety of disciplines have since this topic is not specific and a monopoly to accountants, operations managers, business strategists, human resource managers or marketers. The biggest challenge facing firm performance measurement is most scholars limit themselves to their areas of specialization; few academics cross these functional boundaries to make reference to the research of other experts outside their functional areas (Neely, 2009).

Performance measurement is done against expectations set earlier, monitored, evaluated and recorded over time. Feedback at every time interval enables corrective action and continuous improvement. The performance of business units and functional areas in any business will affect the overall firm performance. Supply chain performance is therefore a subset of overall firm performance. Indeed, the allocation of resources in order to achieve business objectives in an organization is based on the expected results from the business units which will cumulatively determine overall performance of the firm (Desjardins, 2015).

Empirical Review

Various studies have been conducted in relation to technology as a strategic resource on performance of organizations. Mensah (2016) the effect of information and communications technology on financial performance of rural banks in Ghana. Panel Data Regression was used to model the impact of the predictive variables on the dependent variables. The study revealed that deposits as well as efficiency have significant influence on the return on assets of the rural banks. This suggest that in the presence of efficient usage of ICT facilities the rural banks are more likely to experience high deposit turnover hence their ability to transform these deposits into more loans. However, evidence from the analysis suggest weak association between ICT investments and return on assets implying that continuous investment in ICT from competition with other rural banks will put a drain on the returns that the rural banks are to earn on their assets. The findings also reveal significant linkage between efficiency and the dependent variables; return on capital employed and gross profits of the rural banks suggesting that efficient usage of the ICT is relevant to the performance of the rural banking industry than reinvestment into different ICT components. However, on deposits, the findings suggest negative association with return on capital employed but positive association with gross profit of the rural banks.

Partha (2016) looked at the impact of information technology on insurance sector with special reference to the life insurance corporation of India. Considering various needs and requirements of the customers as well as their awareness about the information technology and various information technology enabled services, the insurance companies are dedicatedly trying to gain the maximum utilization of the information technology in their business operation in most efficient and effective way with the help of their strong technology savvy manpower in the competitive market. In the present perspective, the researcher in this paper wanted to study the impact of the modern technology namely information technology on the insurance sector with special reference to the Life Insurance Corporation of India (LICI) in Burdwan district, West Bengal. In this study, accepted 221 usable responses were considered as the sample size and

statistical package SPSS 16 was used to perform the analyses.

Sadiq, Khan, Ikhlaq, Bahaudin and Mujtaba (2015) established the impact of information systems on the performance of human resources department. The main objective is to understand the extent to which HR is being used in increasing the administrative and strategic functions of the HR department. For this purpose, we have conducted a survey of 18 HR managers from various private corporations operating in Lahore, Pakistan. The results show that HR is positively used as a tool to achieve greater administrative efficiency by adding value in the department. However, all of its benefits are difficult to quantify. Human resource is utility as a strategic tool is still not been fully recognized, and this is preventing the system to be used to its fullest potential.

Chege and Njoroge (2016) established the influence of technology on strategy and organizational success: a case of Kenya Power and Lighting Company. The research design for this study was a descriptive research design. Descriptive research describes the situations and seeks to establish whether a relationship exists between two variables, which in this case is technology vis-à-vis strategy. The target population of this study was the entire organization of Kenya Power seeing that the strategy that was used in the research was that of a case study. The research used probability sampling and in particular complex random sampling technique. The data collection instrument that was used in the research was a structured questionnaire. The results and findings of this research was that technology has little effect on strategy in organizations or departments where technology is at the heart of the operations. However it influences the management of technology which in turn has a significant influence on strategy. Technology significantly affects the strategy of organizations or departments where it performs a support role. It makes the business processes more efficient with greater output but that does not mean that without technology the organization or department cannot operate.

Abubakar, Rosmaini and Tasmin (2015) studied the impact of information and communication technology on banks performance and customer service delivery in the banking industry. The effect of globalization, competition and innovation in the banking industry by its providers to offer their services makes essential the understanding of how various aspects of consumer behaviour affect the innovation and respond to customer service delivery. Within this context this paper has considered a critical literature review of previous researchers with the objective to examine the impact of information and communication technology on banks performance and customer service delivery. This paper also makes of a critical review of peer reviewed, scholarly and organizational literature regarding the impact of ict on banks' performance to examine if banks have successfully achieved effective customer's service delivery, by providing high level of customer service through online delivery channel, besides operating cost minimization and revenue maximization.

Kimani (2017) examined the effects of information communication technology strategy implementation on the customer service delivery in the insurance industry in Kenya. The study used a descriptive research design. The target population of the study consisted of the individual policy holders with active policies in the top 10 insurance companies in Kenya. The list of the top 10 insurance companies was obtained from insurance regulatory authority (IRA). A list of the active policy holders was obtained from the respective insurance companies. The sampling technique for this study was stratified random sampling technique. Questionnaires were used to collect data from the selected respondents. Data

collected was analyzed using descriptive and inferential statistics. Descriptive statistical analysis included means and standard deviations. Inferential statistical analysis included making valid conclusions from the data. For this study, data analysis tool used was Statistical Package for Social Sciences (SPSS) computer software.

Kuteli (2010) determined the effect of technology on hanks customer satisfaction in cooperative bank of Kenya. The case study was done on co-operative bank of Kenya. The research took the form of a survey. The population of Interest was staff and customers of co-operative bank. The target population consisted of 1,800,000 customers, based in Nairobi. The study used stratified random sampling. The study Selected a sample of 100 customers using stratified random sampling technique. Both Secondary and primary data was collected for this study. The study found out that LCT has a positive effect on customer satisfaction of the three factors tested, telephone banking has no significant effect while, and mobile banking, internet banking and ATM all have a significant effect on customer satisfaction. The findings are consistent with those previous studies. The study concludes that there is a significant relationship between technology use in banks and banks customer satisfaction.

Mamoudou (2015) focused on the impact of technology in human resources Management. The main aims of an empirical study performed within multinational Manufacturing companies with over five-hundred employees is to identify the level of Using the HR it tools in companies, factors on which management should make stress During the implementation of the it tools and simultaneously find out which it tools can be used in scope of HRM. The research is compiled by forty questionnaire surveys and consecutively by direct observation in the firms and structured interviews with fifteen HR managers. The survey confirms that companies use HR it tools and should contain all HR processes which will sustain all parts of HR it means from recruit to retire Functions within the company. The research presents that the importance of HR – IT Usage is getting more and more important not only due to the fact that HR Productivity increases but at the same time, the value of the organization increases, including the most important asset – human capital.

Olajide (2015) looked at information and communication technology (ICT) and insurance companies profitability in Nigeria. The study is an empirical design which utilized responses of structured questionnaire of 152 respondents from 18 insurance companies to explore the impact of ICT adoption on quality of service delivery and profitability of insurance companies in Nigeria. The study concludes that there is a positive relationship between ICT adoption and insurance companies' profitability in Nigeria. This implies that adoption of ICT by insurance companies can enhance their efficiency, their quality of service delivery, and their profitability. The implication of the findings for practice is that insurance companies should endeavour to update their ICT facilities regularly, in view of its impacts on quality of service delivery and profitability.

Pourmahdi and Omar (2015) did a study on the technology effects on strategic Human resource and performances. Organizations find out that it is necessary to use empirical strategies and adopt various approaches in using valuable recent information to achieve high quality performances. Also, using different stage of technology will decline the transparency in HR departments and improve the HR services in the firms. In conclusion, this study reveals the SHRM Performances in the firms and how technology can influence the effects of SHRM on organizational performances. There is a need to know the results of the moderating role of information to know whether it can decrease or increase the remarkable strategic human resource management influences on firms' performances.

The aim of this study is to evaluate the changes in connection between SHRM and performances (profitability, productivity, Service/product quality) with the moderating role of the information technology.

RESEARCH METHODOLOGY

A descriptive research cross sectional survey design was used in this study. The design was chosen since it was more precise and accurate since it involves description of events in a carefully planned way (Andre, 2004). Reliability coefficient of the research instrument was assessed using Cronbach's alpha (α) which is computed as follows:

$A=k/k\text{-}1\times [1-\sum (S^2)/\sum S^2 sum]$

Where:

α= Cronbach's alpha

k = Number of responses

$\sum (S^2)$ = Variance of individual items summed up

$\sum S^2 sum$ = Variance of summed up scores

The multiple regression models generally assumed the following equation;

$$Y= \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where Y= performance of AAR insurance Kenya limited, β_0=constant, β_1, β_2, β_3 and β_4 = regression coefficients, X_1= Technology in underwriting operations, X_2= Technology in provider management, X_3= Technology in claims management, X_4= Technology in customer service operations and ε=Error Term

FINDINGS

Technology in Underwriting Operations

The study sought to determine the influence of technology in underwriting operations on performance of AAR insurance Kenya limited. The respondents were asked to indicate the extent to which technology in underwriting operations affect the performance of AAR insurance Kenya Limited. Their responses were presented in table 1.

Table 1: Extent of Technology in Underwriting Operations Effect

	Frequency	Percent
Low extent	10	9.6
Moderate extent	26	25
Great extent	50	48.1
Very great extent	18	17.3
Total	**104**	**100**

From the findings the respondents indicated that technology in underwriting operations affect performance of AAR insurance Kenya limited in a great extent as shown by 48.1%, in a moderate extent as shown by 25%, in a very great extent as shown by 17.3% and in a Low extent as shown by 9.6%. This shows that technology in underwriting operations affect performance of AAR insurance Kenya limited greatly. This concurs with Sarich (2015) who argues that commercial underwriting is very low-tech–files and documents are complex, cumbersome and highly paper oriented.

Further the respondents were asked to rate the extent to which they agree with the various aspects technology in underwriting operations effect on performance of AAR insurance Kenya limited. Their responses were presented in table 2.

Table 2: Extent of Effect of Technology in Underwriting Operations Aspects

	Mean	Std. Dev.
Greatly Enhanced Workflow	4.0481	0.7806

Error Reduction	4.1281	0.7716
Paper Reduction	3.3462	0.5706
Accurate mortality assumptions	2.7692	0.8388
Improved loss-ratio for the firm	2.2134	0.7614
Improved underwriting manuals and expert systems	3.8917	0.6736

From the findings, the respondents in a large extent agreed that error reduction as shown by a mean of 4.1281, greatly enhanced workflow as shown by a mean of 4.0481 and improved underwriting manuals and expert systems as shown by a mean of 3.8917 affect the performance of AAR insurance Kenya limited. These findings were in line with Hunn (2015) who argue that technology is driving rapid changes in insurance underwriting across the property/casualty and life/annuity segments.

The respondents also in indifferent extent agreed that paper reduction as shown by a mean of 3.3462 and accurate mortality assumptions as shown by a mean of 2.7692 affect the performance of AAR insurance Kenya limited. However in a low extent, the respondents agreed that improved loss-ratio for the firm as shown by a mean of 2.2134 affect the performance of AAR insurance Kenya limited. These are similar to Malit (2017) who argue that by eliminating many sources of error and improving workflow to allow for underwriting intervention the process becomes a decision-making process rather than a "paper pushing" process. Underwriting rates and rules are followed; authority levels are adhered to through the orchestration engine.

Technology in Provider Management

The study further sought to examine the influence of technology in provider management on performance of AAR insurance Kenya limited. The respondents were asked to indicate the extent to which Technology in provider management affects performance of AAR insurance Kenya limited. Their responses were presented in table 3.

Table 3: Extent of Technology in Provider Management Effect

	Frequency	Percent
Low extent	14	13.5
Moderate extent	23	22.1
Great extent	46	44.2
Very great extent	21	20.2
Total	**104**	**100**

As per the results, the respondents indicated that in a great extent technology in provider management affect performance of AAR insurance Kenya limited as illustrated by 44.2%, in a moderate extent as illustrated by 22.1%, in a very great extent as illustrated by 20.2% and in a low extent Technology in provider management affect performance of AAR insurance Kenya limited as illustrated by 13.5%. This shows that Technology in provider management greatly affect performance of AAR insurance Kenya limited. This correlates with Phaal and Palmer (2017) who notes that monitoring must take place in order to keep track of any changes that may render the technology ineffective, obsolete or even competitively weak.

The researcher also requested the respondents to rate their extent to which they agree with various aspects of Technology in provider management effect on performance of AAR insurance Kenya limited. Their responses were presented in table 4.

Table 4: Extent of Effect of Technology in Provider Management Aspects

	Mean	Std. Dev.
Monitoring	4.1827	0.6793
Control technological capabilities	3.9712	0.6147
Evaluation	2.3269	0.8751
Liaison	3.5769	0.6339
Insurance Agency Management	4.0865	0.6983
Insurance Agent Management	3.0126	0.9361
Endorsements Management	3.7219	0.6734

The respondents in a large extent agreed that monitoring as illustrated by an average of 4.1827, insurance agency management as illustrated by an average of 4.0865 and control technological capabilities as illustrated by an average of 3.9712 affect performance of AAR insurance Kenya limited. These findings are in agreement with Dahad (2015) who argued that changes in the environment could also present an opportunity to the organisation in terms of developing technologies or adopting technologies that give them a competitive advantage in the industry.

The respondents further in a large extent agreed that Endorsements Management as shown by an average of 3.7219 and liaison as illustrated by an average of 3.5769 affect performance of AAR insurance Kenya limited. However, the respondents agreed in indifferent extent that Insurance Agency Management as shown by an average of 3.0126 affect performance of AAR insurance Kenya limited and in a low extent that evaluation as illustrated by an average of 2.3269 affect performance of AAR insurance Kenya limited. These findings are in line with Desjardins (2015) who argued that management of technology is a process that can be broken down to several critical areas that come together to achieve a certain end and it involves aspects such as environmental analysis to determine both the latest technologies available in the market and characteristics of the environment and the fit of these technologies to those particular environments - assessment of technologies and their capabilities vis-à-vis the organizational needs.

Technology in Claims Management

The study also sought to establish the influence of technology in claims management on performance of AAR insurance Kenya limited. The respondents were again asked to indicate the extent to which technology in claims management affect performance of AAR insurance Kenya limited. Their responses were presented in table 5.

Table 5: Extent of Technology in Claims Management Effect

	Frequency	Percent
Low extent	6	5.8
Moderate extent	33	31.7
Great extent	52	50
Very great extent	13	12.5
Total	**104**	**100**

Majority of the respondents indicated that technology in claims management affect performance of AAR insurance Kenya limited greatly as expressed by 50%, moderately as expressed by 31.7%, very greatly as expressed by 12.5% and lowly as expressed by 5.8%. This implies that technology in claims management affect performance of AAR insurance Kenya limited greatly. This conforms to Ashturkar (2015) who argue that insurance companies haven't known what information to look for to effectively manage these data sources from a claims processing perspective.

The researcher also required the respondents to rate the extent to which they agree with effect of various aspects of technology in claims management on performance of AAR insurance Kenya limited. Their responses were presented in table 6.

Table 6: Extent of Effect of Technology in Claims Management Aspects

	Mean	Std. Dev.
Level of transparency in project execution	1.8751	0.8442
Auditing of resources	3.8562	0.8296
Number of published reports	4.0398	0.6671

From the study results, the respondents agreed in a large extent that number of published reports as expressed by a mean score of 4.0398 and auditing of resources as expressed by a mean score of 3.8562 affect performance of AAR insurance Kenya limited. This corresponds to Gheysari *et al*. (2016) who argues that claims processing is the gateway to the customer that will drive improvement in the insurers' customer acquisition, retention, enterprise business intelligence for product development insight sand profitability for the next several years.

However, the respondents agreed in a low extent that level of transparency in project execution as expressed by a mean score of 1.8751 affect performance of AAR insurance Kenya limited. IIF (2016) agrees with findings by arguing that claims triage helps identify total losses early in the claims process and initiate early tow, customize your scoring and thresholds to more accurately define the right resource for you, determine your preferred appraisal resources and specify the resources to send the assignment based on the evaluation results.

Technology in Customer Service Operations

The study further intended to assess the influence of technology in customer service operations on performance of AAR insurance Kenya limited. The respondents were requested to tell the extent to which technology in customer service operations affect performance of AAR insurance Kenya limited. Their responses were presented in table 7.

Table7: Extent of Technology in Customer Service Operations Effect

	Frequency	Percent
Low extent	25	24
Moderate extent	26	25
Great extent	45	43.3
Very great extent	8	7.7
Total	**104**	**100**

The respondents indicated that technology in customer service operations affects performance of AAR insurance Kenya limited in a great extent as shown by 43.3%, in a moderate extent as shown by 25%, in a low extent as shown by 21% and in a very great extent as shown by 7.7%. This shows that that technology in customer service operations affects performance of AAR insurance Kenya limited greatly. Hunn (2015) concurs with findings the development of data warehousing, Business Intelligence, Knowledge Discovery and other technologies help the customer in the collection, collation, processing and utilization of information to achieve significant improvement.

Further the respondents were asked to tell the rate the extent to which they agree with various aspects of technology in customer service operations effect on performance of AAR insurance Kenya limited. Their responses were presented in table 8.

Table 8: Extent of Effect of Technology in Customer Service Operations Aspects

	Mean	Std. Dev.
Customer Relationship Management	4.1750	0.6924
Unified Enterprise	3.2692	0.9056
Control Costs	3.7885	0.6336
Cycle Times	3.5769	0.6339
Growth of customer base	4.2231	0.7967
Customer Exits	2.3173	0.7408

From the findings, the respondents agreed in a large extent that growth of customer base as shown by a mean of 4.2231, customer relationship management as shown by a mean of 4.1750, control costs as shown by a mean of 3.7885 and cycle times as shown by a mean of 3.5769 affect performance of AAR insurance Kenya limited. These findings concur with Gheysari *et al*. (2016) who revealed that insurance companies as an industry that needs to contact customers frequently should pay more attention to customer relationship.

The respondents further in indifferent extent agreed that unified enterprise as shown by a mean of 3.2692 and in a low extent that customer exits as shown by a mean of 2.3173 affect performance of AAR insurance Kenya limited. These are similar to Hunn (2015) who noted that the information from sales, customer service, marketing, manufacturing, inventory and other departments is scattered in the whole enterprise, and the scattered information cannot help the enterprise to get a full understanding about the customer situation.

Performance of AAR insurance Kenya Limited

The respondents were asked to indicate the trend of the various aspects of performance of AAR Insurance Kenya limited for the last 5 years and their responses were used to come up with the findings in table 9.

Table 9: Trend of Performance of AAR insurance Kenya limited

	Mean	Std. Dev.
Profitability	4.0963	0.7438
Customer satisfaction	3.9712	0.7691
Market share	2.4146	0.6911
Customer Service	4.3065	0.4913
Premium Growth	3.8273	0.6457

The respondents indicated that customer Service as expressed by a mean of 4.3065, profitability as expressed by a mean of 4.0963, customer satisfaction as expressed by a mean of 3.9712 and premium Growth as expressed by a mean of 3.8273 had improved for the last 5 years. This is in line with Wahome (2015) who noted that many managers in the industry know their businesses and the strategies required for success but they struggle to translate these theories into action plans for successful implementation of strategies.

The respondents however indicated that market share as expressed by a mean of 2.4146 had decreased over the last five years. This concurs with Kogi (2009) who argues the Kenyan insurance market is young and still not well versed with the diversity of the insurance industry as most people are not used to paying premiums in order to alleviate the risk but most like motor insurers are forced by law such that they normally insure just to use the roads and not as a means of protection.

Regression Analysis

Table 10: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.841	0.708	0.696	0.707

From the ANOVA table, the independent variables were statistically significant predicting the dependent variable since adjusted R square was 0.696 implying that technology in underwriting operations, technology in provider management, technology in claims management and technology in customer service operations explained 69.6% variation in performance of AAR insurance Kenya limited.

Table 11: ANOVA Test

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	123.641	4	30.910	59.987	0.000
	Residual	51.013	99	0.515		
	Total	**34.659**	**103**			

The significance value of 0.000 indicated that the regression relationship was significant at 5 percent level of significance in determining how technology in underwriting operations, technology in provider management, technology in claims management and technology in customer service operations influence performance of AAR insurance Kenya limited.

Table 12: Coefficients of Determination

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.661	0.182		9.126	.000
Technology in underwriting operations	0.684	0.196	0.661	3.490	.001
Technology in provider management	0.586	0.289	0.539	2.028	.049
Technology in claims management	0.735	0.248	0.701	2.964	.005
Technology in customer service	0.804	0.312	0.772	2.577	.014

The established model for the study was:

$Y= 1.661+ 0.684X_1 + 0.586X_2 + 0.735X_3 + 0.804X_4$

Where:-

Y= Performance of AAR insurance Kenya limited

β_0=constant

X_1= Technology in underwriting operations

X_2= Technology in provider management

X_3= Technology in claims management

X_4= Technology in customer service operations

The regression equation above had established that taking (technology in underwriting operations, technology in provider management, technology in claims management and technology in customer service operations), performance of AAR insurance Kenya limited will be 1.661. The findings presented also show that taking all other independent variables at zero, a unit increase in the technology in underwriting operations would lead to a 0.684 increase in the score of performance of AAR insurance Kenya limited. This variable was significant since 0.001<0.05. This concurs with Sarich (2015) who argues that commercial underwriting is very low-tech–files

and documents are complex, cumbersome and highly paper oriented.

Further it was found that a unit increase in the scores of technology in provider management would lead to a 0.586 increase in the scores of performance of AAR insurance Kenya limited. This variable was significant since 0.049<0.05. This correlates with Phaal and Palmer (2017) who notes that monitoring must take place in order to keep track of any changes that may render the technology ineffective, obsolete or even competitively weak.

Further, the findings show that a unit increases in the scores of technology in claims management would lead to a 0.735 increase in the scores of performance of AAR insurance Kenya limited. This variable was significant since 0.005<0.05. This conforms to Ashturkar (2015) who argue that insurance companies haven't known what information to look for to effectively manage these data sources from a claims processing perspective.

The findings show that a unit increases in the scores of technology in customer service operations would lead to a 0.804 increase in the scores of performance of AAR insurance Kenya limited. This variable was significant since 0.014<0.05. This is similar to Hunn (2015) who noted that the information from sales, customer service, marketing, manufacturing, inventory and other departments is scattered in the whole enterprise, and the scattered information cannot help the enterprise to get a full understanding about the customer situation

Overall, technology in underwriting operations had the greatest effect on performance of AAR insurance Kenya limited with a t-value of 3.490 followed by technology in claims management with a t-value of 2.964 then technology in customer service with a t-value of 2.577 while technology in provider management had the least effect on performance of AAR insurance Kenya limited with a t-value of 2.028. all the variables were thus significant with their p- values less than 0.05.

CONCLUSIONS AND RECOMMENDATIONS

The first objective was to determine the influence of technology in underwriting operations on performance of AAR insurance Kenya limited. On this, the study established that technology in underwriting operations affect performance of AAR insurance Kenya limited greatly. It was also found that error reduction, greatly enhanced workflow as well as improved underwriting manuals and expert systems affect the performance of AAR insurance Kenya limited. The paper reduction and accurate mortality assumptions were found to moderately affect the performance of AAR insurance Kenya limited. The study also established a low extent effect of improved loss-ratio for the firm on performance of AAR insurance Kenya limited.

The second objective was to examine the influence of technology in provider management on performance of AAR insurance Kenya limited. The study found that technology in provider management greatly affects performance of AAR insurance Kenya limited. Technology in provider management aspects that had great effect on performance of AAR insurance Kenya limited were monitoring, insurance agency management, endorsements management, liaison and control technological capabilities. There were other aspects of Technology in provider management that contributed a moderate effect on performance of AAR insurance Kenya limited which included insurance agency management evaluation.

The third objective was to establish the influence of technology in claims management on performance of AAR insurance Kenya limited. The study revealed that technology in claims management affect performance of AAR insurance Kenya limited greatly. The further found that number of published reports and auditing of

resources as expressed greatly affect performance of AAR insurance Kenya limited. The study revealed that in a low extent level of transparency in project execution affect performance of AAR insurance Kenya limited.

The last objective was to assess the influence of technology in customer service operations on performance of AAR insurance Kenya limited. The study established that technology in customer service operations affects performance of AAR insurance Kenya limited greatly. The study found that growth of customer base; customer relationship management, control costs and cycle times greatly affect performance of AAR insurance Kenya limited. The study also revealed that unified enterprise and customer exits also affect performance of AAR insurance Kenya limited.

Conclusions of the Study

The study concludes that technology in underwriting operations greatly and positively affects performance of AAR insurance Kenya limited. This is because some of its aspects like error reduction, greatly enhanced workflow as well as improved underwriting manuals and expert systems greatly affect the performance of AAR insurance Kenya limited.

The study also concluded that technology in provider management greatly and significantly affects performance of AAR insurance Kenya limited. The study deduced that the great effect by technology in provider management was as a result of monitoring, insurance agency management, endorsements management, liaison and control technological capabilities greatly affecting performance of AAR insurance Kenya limited.

The study further concluded that technology in claims management on performance of AAR insurance Kenya limited. Number of published reports and auditing of resources were revealed to greatly affect performance of AAR insurance Kenya limited with a low extent effect of level of transparency in project execution on performance of AAR insurance Kenya limited.

The study finally concluded that technology in customer service operations positively and significantly affects performance of AAR insurance Kenya limited. This was as a result of great effect growth in customer base, customer relationship management, control of costs and cycle times on performance of AAR insurance Kenya limited.

Recommendations of the study

The study found that error reduction, improved underwriting manuals and expert systems and greatly enhanced workflow greatly affect the performance of AAR insurance Kenya limited. Therefore, the study recommends that the insurance companies should invest more in modern underwriting technology and data environments. This will form a foundational layer for business transformation which will in turn allow for smarter, more informed risk evaluation decisions by using responsive, dedicated underwriting workstations that are connected to new sources of data and predictive models.

Since technology in provider management was found to greatly affect performance of AAR insurance Kenya limited, the study recommends that the insurance companies should come up with technologies that will be able to address the needs of the organization. The insurance companies should monitor the technology to ensure that it meets desired outcomes in terms of the goals and objectives it was meant to address.

The study revealed that level of transparency in project execution greatly affects performance of AAR insurance Kenya limited. Therefore, the study recommends that the management of insurance companies should advocate transparency when executing the firm projects. This will ensure that there is trust and openness within the stakeholders which in turn improves performance.

The study recommends that managers in insurance companies should invest in feasibility studies aimed at analyzing the factors that influence customer services. This will enable managers to formulate appropriate measures which will ensure that objectives of Meeting customers' needs', plans are successfully implemented.

The studies also recommend that insurance companies should conduct regular monitoring and evaluation intended to measure the effectiveness of the adopted control costs strategies. This is necessary because insurance companies operate in a dynamic business environment which is highly affected by a variety of factors.

Recommendations for Further studies

Since this study focused on AAR Insurance Kenya Limited, the study suggests that another study should be done based on other insurance companies to establish the influence of technology as a strategic resource on their performance. The study also recommends that another study should be done effect of information and communications technology on performance of insurance companies in Kenya.

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