

ANALYSIS OF CHALLENGES AND BENEFITS OF INFORMATION TECHNOLOGY TO THE NIGERIAN INSURANCE INDUSTRY



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Abstract

The purpose of this paper is to ascertain the benefits and challenges of the application of information technology to the Nigerian insurance industry. This work adopted the interview method and personal experience of the researcher. So face-to-face and telephone interviews were used to reach 70 respondents. Adopting IT in insurance industry for quick access to information is important for planning and decision-making, cost reduction, improved insurance culture and penetration. It will further enhance competitiveness, information flow; data update, record keeping and retrieval; engender scientific way of calculating premium and claims management, application of classical mathematical models and improved insurance service delivery. With IT the industry will reach more potential customers, develop relationship with them; streamline operations, reduce costs, improve efficiency, maximise profit, minimise waste, devote talent to core business instead of in ancillary activities; provide better service to customers; support better relationships with key partners; and allow customers to better guide the business.

Keywords: Information Technology, Insurance, e-Commerce,

In this work, information technology will include information, communication technologies (ICTs). Information communication technologies is defined as a “diverse set of technological tools and resources used to communicate, and to create, disseminate, store and manage information” (Okafor, 2009). These technologies include computers, the Internet, broadcasting technologies (radio and television) and telephony.

In a more encompassing definition, IT (information technology) is a term that includes all forms of technology used to create, store, exchange, and use information in its various forms (business data, voice conversations, still images, motion pictures, multimedia presentations, and other forms, including those not yet conceived). It's a convenient term for including both telephony and computer technology in the same word. It is the technology that is driving what has often been called "the information

revolution." (<http://searchdatacenter.techtarget.com/definition/IT>). Information technology, in a nutshell, is the processing of and distribution of data using computer hardware and software, telecommunications and digital electronics (Oghojafor, Aduloju & Olowokudejo, 2011). By this token, it means that every organisation deploys a certain level of technology in its operations. This was not the case in the Nigerian insurance industry until the late 1990s and early 2000s. However, the case has changed enormously. In short, IT has permeated the fabrics of society so much so that the illiterate Fulani herdsman in remote North Eastern Nigeria is carrying a cell phone with an earpiece just like the farmer in rural Bangladesh is inquiring about home from his cotton farm. IT is indeed a revolution that everybody in the world is part of.

Information and communication technology (ICT) is another term for information technology (IT) which stresses the role of unified communications (Murray, 2011) and the integration of telecommunications (telephone lines and wireless signals), computers as well as necessary enterprise software, middleware, storage, and audio-visual systems, which enable users to access, store, transmit, and manipulate information (Wikipedia, 2018). ICT depicts the study of the technology used to handle information and aid communication

Violin (2012) observes that for an insurance firm to compete successfully and operate efficiently it must deploy information technologies such as mobile devices, social media, big data, predictive modelling and cloud computing. Besides matching competition, IT is important in tackling key challenges in the industry, such as growth and retention, risk and compliance, and efficiency and expense control. Insurance companies in Nigeria are not insulated from the international market. Moreover, local companies rely on international reinsurance for them to operate successfully especially when catastrophic and special risks are concerned. It therefore means that to be in communication and competition with the international community, Nigerian insurers must be up-to-date in information technology.

In a study of how IT could enhance firm performance in the area of customer's service and profitability, Oghojafor, et al. (2011) found that most companies have a comprehensive database of their customers but not all make provisions for their customers to carry out major transactions online because they have not fully integrated their customer relationship management with information technology. They further found that the application of IT in customer relationship will improve customer service and organisational profitability. No doubt, this is an indication of the rudimentary stage of IT application in the Nigerian insurance industry.

The objective of this work is to ascertain the benefits and challenges of the application of information technology to the Nigerian insurance industry. It is hoped that practitioners, regulators, researchers and the general public will benefit from the study, in one way or the other.

Methodology

This study used primary data obtained by using structured questionnaire and face-to-face interview with 70 insurance practitioners, academics and policy makers. Furthermore, information was obtained from literature and data analysed by extracting information from the questionnaire and interview reports, classifying them into benefits and challenges of ICT to insurance in Nigeria.

Benefits of Information Technology

According to Honarbri and Alidoost (2013), information technology can be considered as one of the keys to success of insurance companies. Just like the authors observe on the Iranian insurance industry, one of the main changes in the Nigerian insurance industry is the significant growth of computer networks (such as Internet) in marketing and sales of insurance products, even in operations generally. It could be recalled that in Nigeria by year 2000, there were very few insurance companies that had deployed computers in their operations. Those that had, had just a few isolated table top computers operated by a few “key” staff and departments like Accounts, for data storage and retrieval. Rarely had any software been deployed to drive the business of insurance marketing, underwriting and claims management. Incidentally, communications within and outside the country, (particularly with international reinsurance companies, which is inevitable in the business), were through land telephone lines and fax messages. Meanwhile the General System of Mobile Telephony (GSM) had not been introduced in Nigeria (until 2001); although a handful of operators knew about the Internet and e-mail, they were yet to become accredited means of doing insurance business. Expectedly, intranet was non-existent.

Generally, Oghojafor et al. (2011) allude that the deployment of IT in marketing, operations and other areas of the organisation’s activities gives a boost to the sales force equipped with modern portable technological gadgets like the laptop computers, tablets and android cell phones. This enables the collection and management of market and customer data easily. In other words, organisations have different reasons for adopting ICT. It could be used to strategize or for supporting efficient everyday operations. The ease with which the system stores, retrieves, sorts, filters, distributes and shares information can bring substantial benefits in production, distribution, marketing and new product and service development. By extension, IT permeates the entire organisation and its functions. This, Pieterse (2014) supported in his claim that “IT has brought about significant improvements in business operations and in the entire human life as a whole”. In his contribution, Locke (2014) noted that computers and information systems have become vital parts of every business today. In the same vein, Bazini and Madani (2015) felt that ICT can contribute significantly in improving insurance business processes, specifically by reaching new customers and maintaining relations with existing ones. All this is an assertion that IT has come to stay in business

activities generally and insurance in particular. Having observed all these, let's specifically discuss the benefits of information technology to the business of insurance.

Globalization

Globalization, as it is generally believed has not only brought the world closer together, but it has allowed the world's economy to become a single interdependent system. While it brought some benefits, globalization has brought some threats to business, too. This means that we cannot only share information quickly and efficiently, but we can also bring down barriers of linguistic and geographic boundaries. The world has developed into a global village due to the help of information technologies allowing countries who are not only separated by distance but also by language to share ideas and information with each other. This advantage will rub on businesses generally and insurance in particularly.

Communication

With the help of IT, communication has become cheaper, quicker and more efficient. We can now communicate with anyone around the globe by text messaging them or sending them e-mail, Facebook and WhatsApp more recently, for almost instantaneous response. The internet has also opened up face-to-face direct communication from different parts of the world, thanks to the help of video conferencing (Okafor, 2009). Baffoe, (2009) and Odra, (2013), corroborated this position. Technologies such as videoconferencing, e-mail, cell phones, VOIP have made online real-time interactions within and outside the organisation possible. Apampa (2010) doubts if there is any insurance firm that does not host a website where interactions, feedback and information are available round the clock. Definitely there's none!

Bridging the Cultural gap

As a corollary to communication, IT has helped to bridge the cultural gap by helping people from different cultures to communicate with one another, and allowed for exchange of views and ideas, thus increasing awareness and reducing prejudice. Cable television and radio report breaking news, posting events as they are happening and the other times doing documentary on peoples and cultures the viewer/listener would never have known about.

Cost Effectiveness

With information technology business processes are computerised thereby streamlining business to make them extremely cost effective money-making engines. In turn, this increases productivity (as some activities will be speeded up), which ultimately gives rise to profits that means better pay and less strenuous working conditions. In alignment with this position, Pauly (2015) noted that the automation of

business processes in the insurance sector can reduce cost considerably. These costs include agency and commission costs, paperwork costs and personnel costs. Boerners (2013) noted that in the short run, the cost of IT could be high, but the benefits can be enjoyed in the long run. By this, organisations are able to cut down implantation and transaction costs while getting results. Wicks (2014) pointed out how information technology can reduce operational costs. For example, using automated machines reduces the wage bill because there is a reduced need for physical labour. Machines and technology can replace some human tasks, and over time this will make some employees redundant. This saves business paying wages. Furthermore, the use of e-mail will reduce costs incurred on phone bills, courier service and postage of mails. The use of video conferencing in place of personal meetings saves money and time spent on travel and the associated risks.

Doing Business More Time

The introduction of IT has made it possible for businesses to be open 24 x 7 all over the world. This implies that businesses can be open anytime, anywhere making purchases from different countries easier and more convenient. It also means that you can have your goods delivered right to your doorstep.

E-business

According to Croce (2011), often e-commerce and e-business are used interchangeably. However, e-business involves the use of computer technology, hardware, software, internal and external networks to facilitate business processes, and contains within its broad spectrum

- E-commerce – products and services are sold via the web.
- Extranets that connect and facilitate an organisation to customers and suppliers.
- Intranets and other uses of technology that facilitate internal communication, information dissemination, process effectiveness and process efficiency.

Narrowing down the web business further, Honarbari and Alidoost (2013) define e-insurance generally as the application of internet and IT in production and distribution of insurance services; and specifically as providing an insurance cover through a policy which is demanded, proposed, negotiated and contracted online.

E-commerce is merely one aspect of e-business. E-business is more expansive than buying and selling over the internet as it penetrates deeper into the processes and cultures of an organisation. It is the dynamic business landscape that is established by connecting critical business systems directly to associates, customers, vendors and business partners using intranets, extranets, and collaborative applications, mobile technologies and the web. Croce advocated that insurance companies embrace e-business with its larger scope in order to benefit fully.

As price cannot be used in insurance product differentiation, Honarbari and Alidoost (2013) noted that services become the yardstick and such sales made

electronically, i.e., e-insurance will play an important role in reducing prices. Cost reduction will lead to reduction in price which will improve insurance product purchase with positive impact on insurance penetration and organisation's profit. In close relation to this, Meshkat, Farkondehnia, Bagheri, Alihoseini, Sanayeimatak, Esmaeili, Mostafalo, Ebadati and Masaratbakhsh (2012) found that by selling insurance directly to the final consumer, and avoiding commission paid to middlemen, cost of doing business will reduce.

As the insurance business is largely information based, policies can be digitalised. Consequently, ICT and e-business can be appropriate for the industry with impact felt in the following areas, according to market transparency, virtualisation, lowered market entry barriers and specialisation (Mennati, 2010).

In summary, e-insurance will attract among others, the following benefits to insurance: More speed in executing transactions; increased accuracy in handling processes; more and timely information for policyholders thereby improving relationships; update of technology; integration of system with IT; maximization of office space by introduction of virtual business; streamlining of operations; checking fraud; improved communication; efficiency and effectiveness; and automation of system.

Digitalization

“History has shown that once dominant industries and companies can be extinguished by changing customer demands, as well as the emergence of new disruptive technology - think Kodak vs. digital photography – a once dominant company wiped out through a lack of strategic agility and embracing of new technology” (Wavestone, 2016).

Digital services are transforming how customers interact with their insurance company and vice versa. For an insurance industry that is wrestling with silo products, disparate legacy technology platforms and systems, as well as ever increasing regulatory pressures; digital services represent a real opportunity to remain competitive and grow

Cisco (2017) confirmed the new trend toward digitization that is unleashing the power to transform insurance with easier, more cost-effective, and socially acceptable processes. This is made possible by the proliferation of mobile devices, which have become the new basis for business for the millennial generation and others.

Digitizing business processes can deliver significant near-term gains in the form of reduced costs, lower error rates and increased customer satisfaction for carriers across the business line spectrum (Hirst, 2017; Brunner, 2017; and Naujoks, Mueller, & Kotalakidis, 2017).

Digitization gives policy holders 24/7 access across all channels. The focus of every successful digitization strategy is therefore the customer. In the long term, customers will recognize the added value of artificial intelligence systems such as catboats (Giger, 2017).

Product Development

With the availability and analysis of customer data in electronic data warehouse and data mining applications it becomes easier to create insurance products suited to the needs of particular groups of individuals. With technology, the duration it takes to get product into the market could be shortened. Manufacturing software and computer software that can speed up decision making exist.

Marketing

The use of the internet can reduce the physical contact required for insurance to be sold and bought. Products can be presented on the organisations' websites just as application can be done online; thus this can reduce customers' demand for personal information and facilitate closing contracts. The company's website can be an important platform for dissemination of information on the company and its services, even when products are not sold – a form advertisement. Access to a wider market is also a benefit. With the internet, the entire globe becomes the firm's marketplace, although a segment may be the target. Operating in a wider market has a tendency of increased turnover and profit.

In its marketing effort, the insurance company collects personal data on prospective and existing customers in respect of their cultures, religions, hobbies, birthdays, and similar information concerning their loved ones. The insurer relies on the computer to remind him of his marketing meetings, the birthdays and important occasions of his esteem clients and prospects.

Sales

Automatic premium computation modules allow individual contract design. Following cost cuts from automated contracting process, doing insurance business online can lead to reduced rate being offered to the client.

Improved Agency Relationship

In this case, Violino (2012) opined that organisations are “implementing software to support the use of electronic application forms for insurance policies, with the goal of automating process steps and achieving straight-through-process (STP).” STP will enable the entire system to operate electronically thereby doing away with manual processes; operating costs will reduce while services will speed up.

Underwriting and Reinsurance

The deployment of computer software now makes underwriting more scientific and easier. There are some underwriting software programmed to automatically analyse risk using points allotments to factors like location, availability of security, moral and physical hazards, cubic capacity, occupation etc., to guide in decision to either accept or reject the risk.

These days, there is good computer software that can arrange treaties and even draft the wordings. The same thing applies to facultative reinsurance business. In any case, the software works out and monitors premiums due to the reinsurers. It will, more importantly, monitor recoveries, cash calls and return premiums from the reinsurers.

Increased Service Delivery

This is an area where banks, insurance companies and other service-based organisations have benefitted (Baffoe, 2009). In fact, the speed of transaction can be increased by the use of internet in conjunction with mobile phones, tablets and I-pads.

Word-processing and Spread Sheet

Computer has virtually replaced typewriter in the typing job as the former is more effective and efficient; and so can do much more than typing and printing. The spread sheet (Microsoft Excel, for example), is handy in accounting, human resources and in all aspects of the organisation's activities.

Administration

An internet-based administration can reduce time and costs for both customers and the insurers. This is more so through self-administration and internal workflow automation. In document management at present, the computer can hold "physical" documents electronically, thereby solving the problem of piling up physical filing cabinets, with overflowing in-tray and out-tray, which has over the year become a characteristic of insurance firms. Digital cameras are handy in claims management in taking and storing pictures of interest in an incident.

Asset Management

Information technologies facilitate access to information relevant to investment decisions in insurance companies, meanwhile investment can be conducted online.

Claims Management

Incidents leading to claim can be transmitted online to the insurer, e.g., reports and digital photos. This will lead to reduction in paperwork. Third party firms such as auto repair companies and tradespersons can be incorporated more easily in the claim follow-up by electronic transfer of reports, claim estimates and invoices. Finally, claims settlement can also take place electronically.

Process Improvement

This is another importance of information technology to the insurance company. There is also software that can drive the system to make the process more effective and efficient. The improvement could be in general administration, human resources management, underwriting and claims management, sales and marketing.

Integration of Stakeholders

Through the firm's website it is able to communicate with and obtain feedback from vendors, suppliers, customers, shareholders, employees and a host of other stakeholders.

Efficient Customer Service

By deploying the internet in making orders and carrying out transactions provides a fast and reliable system of distributing goods and services to the wider market. Online payment systems improve the process of cash transactions and reduce the costs incurred, e.g., reduction in interest charges and bank fees. The internet supports such phenomena as social networks, e-mail and company websites with individual customer; as Hagen, Hales, Reifel, Pei and Miller (2011) admonished insurance companies that want to be leaders in the industry to focus on three innovative technologies – social networking, telematics and service-oriented architecture. They held that Chief Information Officers (CIO) that harnesses the right technologies can lead the way.

Profit Growth

Profit maximization is common object of business organisations; and this can be obtained by either cutting costs or increasing prices. As it might not be easy to raise price, Ingram (2014) held that technology is capable of being highly effective in lowering operational costs which will have direct effect on profit.

Gaining Market Share

Technology grants the company access to all forms consumer groups which interactions with them can open a vast range of opportunities for market share growth and expansion into foreign markets. "Technology helps companies to build subsidiaries and strategic partnerships around the world, since communication and travel times have been reduced seriously by advances in communications and transportation technology," Ingram (2014), alluded.

Improved Customer Relations

With access to the underwriter's portal, the policyholder can update information online, freeing up service centre personnel to perform other functions. This by extension affords the policyholder self-service capabilities with opportunities to update addresses and the like online.

Quality and Accuracy

Machines are capable of producing the same standard of product or data over and over again, which replaces human error and therefore reduces waste or error.

Challenges of Information Technology

The mantra has always been that the insurance industry is conservative compared to many other industries, especially when it comes to technology. Philippens and Schoutelen (2014) present a 2010 report on a survey of usage of social media in 30 industries. Insurance came 28th, ahead of only Zoos and Funeral Homes. In other words, it beat animals and dead people!

There's no doubt things are changing with insurance in the application of technology. For example, as noted earlier, insurance companies deploy various forms of IT products in their business and as Philippens and Schoutelen (2014) report of an insurance company using GPS from smartphone to consummate location-based insurance policy. Notwithstanding the numerous benefits of IT, there are also challenges to its use.

Globalization

Globalization, as it is generally believed has not only brought the world closer together, but it has allowed the world's economy to become a single interdependent system. While it brought some benefits, globalization has brought some threats to business. Okafor (2009) delineates this threat into local and foreign. Local threats come from companies from other industries, e.g., banks and conglomerates armed with world class information of similar practices. Such companies poach businesses that ordinarily are the purview of insurance. Banks, today are offering products that are insurance-related. On the other hand, foreign threats come from acquisitions, reinsurance and retrocession. "The reduction in the cost of communication, occasioned by the internet, is encouraging strong international businesses to encroach in local markets, to the detriment of weaker local ones, and acquisition threat is now more glaring."

Big Data

One other challenge the insurance firm faces is that of big data (large amounts of data). For a life underwriter with a large policy holder, say 500,000, to key the full data of all of them will run into terabytes of data per period. Then after collecting the data, it is analysed. It is noteworthy that the velocity of big data coming into an organisation can be very difficult to manage.

Implementation Expenses

Start-up costs of IT are usually very high. This involves investment in hardware, software, user licence, employees and training plus maintenance expenses. Similarly, there are indirect costs associated with the acceptance of the new technology by employees. The cost of equipment includes the purchase price plus any sales tax (less discount received from the seller), transportation costs paid by the buyer to transport asset to the location in which it will be used, expenditures for installation,

testing, legal fees to establish title, and any other costs of bringing the asset to its condition and location for use.

Job Elimination

The deployment of IT definitely will displace some employees whose duties the computer system is performing. For example, as automated telephone answering device are deployed, receptionists are displaced in the organisation.

Staff Hiring

The cost of hiring IT workers also includes cost of their training and motivation, processes that must be well executed to contribute to the financial growth of the organisation. Posey (2011) posited that “finding the best person for an IT position requires more than just matching up skills with job requirements.” Posey shared some tips for making a successful hire: test candidate for proficiency; ask about achievements; chemistry; test in creativity and flexibility. In the same vein, Hull (2012) found that at the pace technology is advancing that it would be difficult to get the right people and train them to match the pace. This is true because gadgets, equipment or system that was current yesterday becomes obsolete tomorrow. In that regard, managers must ensure they make the right choice about IT in a manner to balance cost-benefit effect.

Security Breaches

The main flaw of IT systems is that there are vulnerable to security breaches, especially when accessing the internet. In case adequate measures are not taken, unauthorised persons may access confidential data. In some cases, information may be altered, destroyed or used for distasteful purposes. Virus attack can destroy very large volumes of data or files.

Computerisation means linking branches and/or other operators in the industry through the Wide Area Network (WAN). This leads to increased exposure of the organisation’s data and operations with a tendency of being hacked into and other incursion.

Suitability of Insurance Products for Internet Distribution

The suitability of insurance products for internet distribution depends mainly on the insurance company offering equivalent direct purchase insurance products (www.mas.gov.sg, 2017). What can be provided on the internet is general information while a personal talk at the insurer’s office or the policyholder’s place may be necessary if a lot of personal advice is needed. In other words, products that require little information are more suitable for internet distribution than those that require much information. The author added that “the more complex the product and the bigger its financial scale, the larger the client’s need for advice.” The two criteria involved to determine direct contact with the client are product complexity and transaction volume.

In all, “standardised products which can be described and tariffed easily are more suited for internet distribution than complex and expensive products.” Products that can be distributed on the internet include motor, household, private liability and term life insurance. It is easy to compare prices online. On the other hand, commercial motor, health index-linked life products, annuity products, and large commercial risks are not suitable for internet distribution.

State of Information Technology Application in the Nigerian Insurance Industry

Sapa, Phunde and Godbole (2014) found that the insurance sector in India posts the highest e-business/ICT application rate among other sectors. Usually e-commerce transaction can have five phases: search, valuation, logistics, transaction and after sales services. A customer, who intends to buy an electronic insurance policy, may pass the first five phases. However, this is not the case in Nigeria where insurance companies are yet to integrate ICT in their transactions, meaning the industry could be lagging behind the advanced economies’ risk bearers by over a decade. Apampa (2010) in taking a critical look at the level of information and communication technology penetration in the Nigerian insurance industry corroborated this position. The finding shows that most insurance companies in Nigeria are yet to completely align ICTs with business and organisational goals. Notwithstanding most practitioners have adopted ICT for business, its role in insurance is yet to be fully understood. On the other hand, he believes for most insurance executives and managers, ICT is very important and highly regarded in the organisational value chain.

For IT and future growth of Nigerian insurance industry, PRNewswire (2014) posted a report by the Deloitte Center for Financial Services advising insurers to “be thinking about the transformational steps and technology solutions they can deploy to raise their game for long-term growth.” The report identified “smartphone applications, aggregated data bureaus and the use of telematics by small carriers as examples of technology innovation for the industry in the year ahead.” By this token, application of IT to insurance has come to stay and would be a continuous process and improvement in technology will continue unabated. For the Nigerian insurance industry to survive competition from the local and global markets, it must continue to adapt to advances in technology.

Summary and Conclusion

In all, Croce (2011) advocated and supported a slow revolutionary migration to e-business by the insurance because there are colossal challenges to consider as a risk bearer; “...adopting a fast-paced revolutionary approach could prove to be counter-productive.” Two key considerations are important before a company can fully embrace e-business. These considerations include the disruption that the adoption could cause the agency/brokerage force and the suitability of insurance products to e-commerce. Notwithstanding, some savvy insurance companies that have identified the

compatibility of e-business and current distribution channels are already implementing e-business strategies in order to gain market share.

The application of IT in insurance industry for quick access to information is needful for planning and decision-making. This is so much as such application will lead to cost reduction, improved insurance culture, enhance competitiveness, information flow, data update, record keeping and retrieval, introduce scientific way of calculating premium and claims management, encourage application of classical mathematical models and improved insurance service delivery.

From our discussion thus far, there is no doubt that the application of IT in the Nigerian insurance industry will benefit all the stakeholders – the insurer, the insured, regulator/supervisor, third parties, government, the economy and society at large. In a nutshell, with the application of IT the industry will reach more potential customers, develop relationship with them; streamline operations, reduce costs, improve efficiency, maximise profit, minimise waste, devote talent to core business instead of incidentals; provide better service to customers; support better relationships with key partners; and allow customers to better guide the business.

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