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# Impact of Technology on Business Values and Marketing in Insurance Sector in India

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***Abstract*—** Today Internet has provided brand new distribution channels to the Insurers. The technology has enabled the Insurer to innovate new products, provide better customer service and deeper and wider insurance coverage to them. On insurance front, people started relying on internet to research about the kinds of products. However, with each passing year, digital insurance industry gradually expanded its footprints in India. E-business affects the whole business and the value chains in which it operates. It enables a much more integrated level of collaboration between the different components of a value chain than ever before. Adopting e-Business also allows companies to reduce costs and improve customer response time. This paper highlights Changing Scenario, impact, Latest Trends, Challenges to Enhance Technology in Insurance Sector and Penetration of e-commerce in the Indian Insurance Industry.

***Keywords***- *Internet, Digital insurance, E-business, E-commerce, Technology*

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## I. INTRODUCTION

The term 'E-commerce' has become widespread; a force that is here to stay. E-Commerce and the Internet are increasingly becoming one of the most important drivers of strategic change for business and governments. [1]

Similarly, it is beginning to have a significant impact on people's lives. Everyone from shops to financial institutions is looking for ways to leverage the Internet for increased revenues, improved profitability and greater customer/brand loyalty.

Today, electronic commerce is breaking the traditional concept and rules of operations, transforming the way enterprises do business and making them confront a new competitive edge. It has been said, therefore, that only organizations that recognize the power of customers and satisfy their needs will move toward sustainability. In many firms, information technology (IT) gives a major transforming advantage in marketing, operations, and other activities of an organization by providing the sales force with a wide array of hand held and laptop computers that enable the firms to collect detailed customer and market data, and by managing the entire order fulfillment process, including demand planning.[2]

It is important to acknowledge the fact that for effective management and growth of an organization in any sector, whether banking, insurance, engineering, entertainment, etc., there has to be a conscious effort by the management towards making it customer oriented. Customer relationship activities also include learning a customer's individual interest and then tailoring services to meet them. Such programs help companies retain customers not only by providing a useful service but also by making customer feel appreciated. Information technology is the processing and distribution of data using computer hardware and software, telecommunications, and digital electronics.

The insurance sector will grow steadily rather than rapidly. The law and regulations in place are adequate to ensure financial strength and solvency of insurers. Because of the Information revolution, customers are free to choose from a wide range of new and innovative products. Collaborate, look to all your partners, peers and competitors to, at the very least, learn from them and, at best, work with them on achieving something new or learn how to approach opportunities from a different perspective. The real evolution is however emerged out of Internet boom. The Internet has provided brand new distribution channels to the Insurers. The technology has enabled the Insurer to innovate new products, provide better customer service and deeper and wider insurance coverage to them. At present, Insurance companies are giving customers a distinct claim id to track claims on-line, entertaining on-line enrollment, eligibility review, financial reporting, and billing and electronic fund transfer to its benefit clan customers. It is estimated that India would create ample opportunities for the development of insurance backed by regulations in line with international best practices. There is no doubt that, in a decade, Indian insurance market will be among the front-runners in the world.

## II. E-BUSINESSES

E-business affects the whole business and the value chains in which it operates. It enables a much more integrated level of collaboration between the different components of a value chain than ever before. Adopting e-Business also allows companies to reduce costs and improve customer response time. Organizations that transform their business practices stand to benefit immensely from innumerable new possibilities brought about by technology.[3] E-commerce as anything that involves an online transaction. This can range from ordering online, through online delivery of paid content, to financial transactions such as movement of money between bank accounts. One area where there are some positive indications of e-commerce is financial services. Online stock trading saw sustained growth throughout the period of broadband diffusion. E-shopping is available to all these who use a computer.

## III. E-COMMERCE

E-commerce as anything that involves an online transaction. This can range from ordering online, through online delivery of paid content, to financial transactions such as movement of money between bank accounts.[4]

E-commerce is the fastest growth area in the global economy and almost carries potentials beyond measure. It provides consumers with the benefits of anytime, anywhere transactions, with lower costs. Moreover it, shortens the distance between the buyer and the seller and shrinks the world into a small village.

Electronic commerce, commonly known as E-commerce or e Commerce, is a type of industry where the buying and selling of products or services is conducted over electronic systems such as the Internet and other computer networks. Electronic commerce draws on technologies such as mobile commerce, electronic funds transfer, supply chain management, Internet marketing, online transaction processing, electronic data interchange (EDI), inventory management systems, and automated data collection systems. Modern electronic commerce typically uses the World Wide Web at least at one point in the transaction's life-cycle, although it may encompass a wider range of technologies such as e-mail, mobile devices, social media, and telephones as well).

Trading electronically offers a number of advantages to companies. To take advantage of the opportunities created by e-commerce, companies implement websites that operate at a high level of e-commerce. Moore's classification identifies the different e-commerce capabilities that a website has. It is acknowledged that websites can be basic, including only company information or more advanced with functionality for generating market sales. Electronic commerce is generally considered to be the sales aspect of e-business. It also consists of the exchange of data to facilitate the financing and payment aspects of business transactions. This is an effective and efficient way of communicating within an organization and one of the most effective and useful ways of conducting business.

Electronic commerce may have large economic effects in the future. Internet commerce will change the face of business forever. Moreover, e-commerce will change Insurance industry in 21st century. The e-commerce has affected the global economy in many different ways. First of all, it has affected the information technology, and all the economic sectors, all and above e-commerce has enhanced the productivity growth worldwide. The impact of e–commerce on developing countries could be even stronger than that on developed countries because the scope for reducing inefficiencies and increasing productivity is much larger in the developing countries.

## IV. TECHNICAL AND OPERATIONAL FACTORS OF E-COMMERCE

1. ***Protocol (Standards) Making Process***: A well-established telecommunications and Internet infrastructure provides many of the necessary building blocks for development of a successful and vibrant e-commerce marketplace.

2. ***Delivery Infrastructure***: Successful e-commerce requires a reliable system to deliver goods to the business or private customer.

3. ***Availability of Payment Mechanisms***: Secure forms of payment in e-commerce transactions include credit cards, checks, debit cards, wire transfer and cash on delivery.

4. ***General Business Laws***: The application of general business laws to the Internet will serve to promote consumer protection by insuring the average consumer that the Internet is not a place where the consumer is a helpless victim.

5. ***Public Attitude to E-commerce***: The public attitude toward using e-commerce in daily life is a significant factor in the success of ecommerce.

6. ***Business Attitude to E-commerce:*** The willingness of companies to move away from traditional ways of doing business and develop methods and models that include e-commerce is essential.

## V. E-COMMERCE MODEL

Electronic commerce, commonly known as E-commerce, is a type of industry where the buying and selling of products or services is conducted over electronic systems such as the Internet and other computer networks.E-Commerce model classified by the nature the transactions or the relationship among the participants into these categories:

1. ***Business-to-Business (B2B):*** E-commerce model in which all the participants are businesses or other organizations for example A Auto Company sells its products to other companies.

2. ***Business-to-Consumer B2C:*** E-commerce model in which businesses sell to individual shoppers for example any person can enter amzon.com and buy products from that web site.

3. ***Business-to-Business-to-Consumer (B2B2C):*** E-commerce model in which a business provides some product or service to a client business that maintains its own customers for example Intel manufacturing computer processors and sell it to HP which makes computers that final consumer can buy.

4. ***Consumer-to-Business (C2B):*** E-commerce model in which individuals use the internet to sell products or

services to organizations or individuals who seek sellers to bid on products or services they need.

5. ***Business-to-Employees (B2E):*** E-commerce model in which an organization delivers services, information, or products to its own employees. It is considered a subset of Intra-business EC.

6. ***Consumer-to-Consumer (C2C):*** E-commerce model in which consumers sell directly to other consumer. Various marketplaces plays the role of mediator by enable the user to buy from other users like ebay.com.

## VI. Importance and Uses of E-Commerce

Exploitation of New Business: Broadly speaking, electronic commerce emphasizes the generation and exploitation of new business opportunities and to use popular phrases: "*generate business value*" or "*do more with less*".

1. ***Enabling the Customers:*** Electronic Commerce is enabling the customer to have an increasing say in what products are made, how products are made and how services are delivered.

2. ***Improvement of Business Transaction Electronic:*** E-Commerce endeavors to improve the execution of business transaction over various networks.

3. ***Effective Performance:*** It leads to more effective performance i.e. better quality, greater customer satisfaction and better corporate decision making.

4. ***Greater Economic Efficiency:*** We may achieve greater economic efficiency (lower cost) and more rapid exchange (high speed, accelerated, or real-time interaction) with the help of electronic commerce.

5. ***Execution of Information:*** It enables the execution of information-laden transactions between two or more parties using inter connected networks. These networks can be a combination of old telephone system (POTS), Cable TV, leased lines and wireless. Information based transactions are creating new ways of doing business and even new types of business.

6. ***Incorporating Transaction:*** Electronic Commerce also incorporates transaction management, which organizes, routes, processes and tracks transactions. It also includes consumers making electronic payments and funds transfers.

7. ***Increasing of Revenue:*** Firm use technology to either lower operating costs or increase revenue. Electronic Commerce has the Potential to increase revenue by creating new markets for old products, creating new information-based products, and establishing new service delivery channels to better serve and interact with customers. The transaction management aspect of electronic commerce can also enable firms to reduce operating costs by enabling better coordination in the sales, production and distribution processes and to consolidate operations arid reduce overhead.

8. ***Reduction of Friction:*** Electronic Commerce research and its associated implementations is to reduce the '*friction'* in on line transactions frictions is often described in economics as transaction cost. It can arise from inefficient market structures and inefficient combinations of the technological activities required to make a transaction. Ultimately, the reduction of friction in online commerce will enable smoother transaction between buyers, intermediaries and sellers.

9. ***Facilitating of Network Form:*** Electronic Commerce is also impacting business to business interactions. It facilitates the network form of organization where small flexible firms rely on other partner, companies for component supplies and product distribution to meet changing customer demand more effectively. Hence, an end to end relationship management solution is a desirable goal that is needed to manage the chain of networks linking customers, workers, suppliers, distributors and even competitors. The management of online transactions in the supply chain assumes a central role.

## VII. How E-commerce will Affect the Economy?

The electronic economy will force change within nation states. The modern nation state remains the most prevalent unit of governance in the developed and the developing world. The concept has, in the last 50 years, been extended rather than retracted. There are now more than 200 hugely different nation states, with different legal and regulatory systems, existing in the world. During its 200 year history, the nation state has endured many changes. However, the advent of the electronic economy is confronting the nation state, with intimations of a future in which its relevance to its citizens and enterprises will be challenged. The apparatus of economic regulations and taxation through which nation states operate was developed to support and facilitate industrial economy. That economy produces tangible and location bound services that are sold and distributed within and between fixed borders. In that familiar world of national and international trade, nation states have a variety of tools at their disposal to achieve their economic ends. They can levy tariffs on imports, raise taxes, protect consumer's rights, punish economic criminals, set commercial standards, and provide guarantees of monetary payment. Until recently, these tools were supported by government's majority control over communications networks and information dissemination. Because of the emergence of global communications networks, the nation state is gradually losing monopoly control of information and financial flows.

Private individuals and enterprises and groups now have the ability to source, package, and transmit information in compressed time and space. Through "digitization" currency, services, and even some goods can be conveyed immediately, transacted invisibly across the globe. Interactive networks are creating a new, network-linked world without borders, in which many commercial transactions are beyond the reach of national jurisdictions, laws, and taxation systems. As a result, many of the economic instruments and processes of the nation state need to be reexamined in the light of these new challenges. It is nation state powerless before this new global economic system. As electronic commerce grows, there is some risk that those nation states that have not fully embraced the changes could become marginal to the creation of economic value and electronic economy. Could the changes erode the individuals' sense of national belonging, undermine tax bases, bypass national laws and undermine the rights of citizens.

## VIII. INSURANCE

Insurance is an agreement where, for a stipulated payment called the premium, one party (*insurer*) agrees to pay to the other (*the policyholder or his designated beneficiary*) a defined amount (*the claim payment or benefit*) upon the occurrence of a specific loss. This defined claim payment amount can be a fixed amount or can reimburse all or a part of the loss that occurred. The insurer considers the losses expected for the insurance pool and the potential for variation in order to charge premiums that, in total, will be sufficient to cover all of the projected claim payments for the insurance pool.[5]

The premium charged to each of the pool participants is that participant's share of the total premium for the pool. Each premium may be adjusted to reflect special characteristics of the particular policy. Normally, only a small percentage of policyholders suffer losses. Their losses are paid out of the premiums collected from the pool of policyholders. Thus, the entire pool compensates the unfortunate few. Each policyholder exchanges an unknown loss for the payment of a known premium.

Under the formal arrangement, the party agreeing to make the claim payments is the insurance company or the insurer. The pool participant is the policyholder. The payments that the policyholder makes to the insurer are premiums. The insurance contract is the policy. The risk of any unanticipated losses is transferred from the policyholder to the insurer who has the right to specify the rules and conditions for participating in the insurance pool. The insurer may restrict the particular kinds of losses covered. For example, a peril is a potential cause of a loss. Perils may include fires, hurricanes, theft, and heart attack. The insurance policy may define specific perils that are covered, or it may cover all perils with certain named exclusions.

## IX. HISTORICAL REVIEW OF INSURANCE

Insurance in India can be traced back to the *Vedas*. For instance, *yogakshema*, the name of Life Insurance Corporation of India's corporate headquarters, is derived from the *Rig Veda*. The term suggests that a form of 'community insurance' was prevalent around 1000 BC and practiced by the *Aryans*. Burial societies of the kind found in ancient Rome were formed in the Buddhist period to help families build houses, protect widows and children. Bombay Mutual Assurance Society, the first Indian life assurance society, was formed in 1870. Other companies like Oriental, Bharat and Empire of India were also set up in the 1870-90s. It was during the *swadeshi* movement in the early 20th century that insurance witnessed a big boom in India with several more companies being set up. As these companies grew, the government began to exercise control on them.

The Insurance Act was passed in 1912, followed by a detailed and amended Insurance Act of 1938 that looked into investments, expenditure and management of these companies' funds. By the mid-1950s, there were around 170 insurance companies and 80 provident fund societies in the country's life insurance scene. However, in the absence of regulatory systems, scams and irregularities were almost a way of life at most of these companies. As a result, the government decided nationalizes the life assurance business in India. The Life Insurance Corporation of India was set up in 1956 to take over around 250 life companies.

Insurance has a long history in India. Life Insurance in its current form was introduced in 1818 when Oriental Life Insurance Company began its operations in India. General Insurance was however a comparatively late entrant in 1850 when Triton Insurance company set up its base in Kolkata. History of Insurance in India can be broadly bifurcated into three eras - *Pre Nationalisation, Nationalisation and Post Nationalisation*. Life Insurance was the first to be nationalized in 1956. Life Insurance Corporation of India was formed by consolidating the operations of various insurance companies. General Insurance followed suit and was nationalized in 1973. General Insurance Corporation of India was set up as the controlling body with New India, United India, National and Oriental as its subsidiaries. The process of opening up the insurance sector was initiated against the background of Economic Reform process which commenced from 1991. For this purpose *Malhotra* Committee was formed during this year who submitted their report in 1994 and Insurance Regulatory Development Act (IRDA) was passed in 1999. Resultantly Indian Insurance was opened for private companies and Private Insurance Company effectively started operations from 2001.[6]

## X. THE INSURANCE INDUSTRY OF INDIA

The insurance industry of India consists of 53 insurance companies of which 24 are in life insurance business and 29 are non-life insurers. Among the life insurers, Life Insurance Corporation (LIC) is the sole public sector company. Apart from that, among the non-life insurers there are six public sector insurers. In addition to these, there is sole national re-insurer, namely, General Insurance Corporation of India. Other stakeholders in Indian Insurance market include agents, brokers, surveyors and third party administrators servicing health insurance claims. Out of 29 non-life insurance companies, five private sector insurers are registered to underwrite policies exclusively in health, personal accident and travel insurance segments. They are Star Health and Allied Insurance Company Ltd, Apollo Munich Health Insurance Company Ltd, Max Bupa Health Insurance Company Ltd, Religare Health Insurance Company Ltd and Cigna TTK Health Insurance Company Ltd. There are two more specialised insurers belonging to public sector, namely, Export Credit Guarantee Corporation of India for Credit Insurance and Agriculture Insurance Company Ltd for crop insurance.

India's life insurance sector is the biggest in the world with about 360 million policies which are expected to increase at a Compound Annual Growth Rate (CAGR) of 12-15 per cent over the next five years. The insurance industry plans to hike penetration levels to five per cent by 2020. The country's insurance market is expected to quadruple in size over the next 10 years from its current size of US$ 60 billion. During this period, the life insurance market is slated to cross US$ 160 billion.

The general insurance business in India is currently at Rs 78,000 crore (US$ 11.44 billion) premium per annum industry and is growing at a healthy rate of 17 per cent. The Indian insurance market is a huge business opportunity waiting to be harnessed. India currently accounts for less than 1.5 per cent of the world's total insurance premiums and about 2 per cent of the world's life insurance premiums despite being the second most populous nation. The country is the fifteenth largest insurance market in the world in terms of premium volume, and has the potential to grow exponentially in the coming years.[7]

**Insurance Sector Reforms**

In 1993, Malhotra Committee, headed by former Finance Secretary and RBI Governor was formed to evaluate the Indian insurance industry and give its recommendations. The committee came up with the provisions that Private Companies with a minimum paid up capital of Rs.1bn should be allowed to enter the industry. Foreign companies may be allowed to enter the industry in collaboration with the domestic companies.Only one State Level Life Insurance Company should be allowed to operate in each state. It was after this committee came into effect the regulatory body for insurance sector was formed with the name of IRDA. The IRDA since its incorporation as a statutory body has been framing regulations and registering the private sector insurance companies. IRDA being an independent statutory body has put a framework of globally compatible regulations.

## Changing Scenario of Insurance Industry in India

The Insurance industry in India has undergone transformational changes over the last 20 years. Liberalization has led to the entry of the largest insurance companies in the world, who have taken a strategic view on India being one of the top priority emerging markets. The industry has witnessed phases of rapid growth along with spans of growth moderation, intensifying competition with both life and general insurance segments having more than 20 competing companies, and significant expansion of the customer base. There have also been number of product innovations and operational innovations necessitated by increased competition among the players. Changes in the regulatory environment had path-breaking impact on the development of the industry. While the life insurance industry got affected by the introduction of cap in charges, the general insurance industry got impacted by price de-tariffication and Motor third party risk pooling arrangements. While the insurance industry still struggles to move out of the shadows cast by the challenges and uncertainties of the last few years, the strong fundamentals of the industry augur well for a roadmap to be drawn for sustainable long-term growth.

The available headroom for development, sustainable external growth drivers, and competitive strategies would continue to drive growth in the gross written premiums. However, insurance companies would need to address the key concern around losses that continue to be a drag on the capital and on the shareholders' return expectations. In order to achieve profitable growth for long term sustainability, insurers have two key imperatives. Firstly, they would need to conserve capital and optimize the existing resource deployment and distribution networks. Secondly, they would need to innovate not only in terms of value propositions but more importantly in terms of operating models in order to develop sustainable competitive edge. Consumer awareness and protection has been a prominent part of the regulatory agenda. Regulatory developments in the recent years show the focus on increasing flexibility in competitive strategies such as niche focus, merger and acquisitions and on removing structural anomalies in the products and operations. While these initiatives would enable long term industry growth, the role of the regulator in providing an enabling environment to achieve profitable growth in the near to medium term cannot be undermined.

## E-commerce and Insurance Industry

The conditions for doing business are rapidly changing. The Internet and related advances in information technology significantly affect financial services in general and insurance markets and institutions in particular. The growing importance of e-commerce represents a watershed event for insurance markets and institutions, as it does for most industries. By lowering information costs, e-commerce will enable insurers to classify, underwrite, and price risk as well as settle claims more accurately and efficiently. Overall, the Internet will significantly enhance the efficiency of insurance markets and institutions and benefit consumers by lowering transaction and information costs. The effects of e-commerce are the subjects of intense debate in insurance industry.

The recent growth of Internet infrastructure and introduction of economic reforms in the insurance sector have opened up the monopolistic Indian insurance market to competition from foreign alliances. Although the focus of e-commerce has been mainly on business to consumer (B2C) applications, the emphasis is now shifting towards business to business (B2B) applications. The insurance industry provides an appropriate model that combines both B2C and B2B applications.[8]

Traditional insurance requires a certificate for every policy issued by the insurance company. However, paper certificates encumber problems including loss, duplication and forging of the certificate. The conventional certificate is now replaced with an electronic certificate that can be digitally signed by both the insurer and the insurance company and verified by a certifying authority. Online policy purchase is faster, more user-friendly and definitely more secure than the traditional processes. Therefore it is more attractive to the insurer. At the same time it incurs less cost and requires fewer resources than traditional insurance and is therefore more profitable for the insurance company.

E-commerce is potentially applicable to marketing and sales as well as R&D with respect to insurance value chain. On the other hand, as far as insurance products concern, auto insurance, marine and aviation, life insurance and fire insurance were highly perceived to suitable to sale online. Finally, the insurance companies were chiefly believed that in the case of e-commerce application they would get these benefits: brand and image promotion, extended corporation with partners, lower invest for establishing the sales and after sales services network, cost reduction in value chain management and decentralization and no restrictions imposed by national borders. E-insurance also makes the insurance procedure more secure since the policy details are stored digitally and all transactions are made over secure channels. These channels provide additional market penetration that is absent in traditional channels and help in earning more revenue than traditional insurance processes.

## XI. The Impact of Technology on Insurance Sector

Insurance industry is an important part of the economy and a supporting system of financial markets. The funds appropriated from the sales of various insurance policies, leads to economic prosperity, creating employment and long-term and profitable investments. On the other hand, insurance industry by compensating losses due to adverse events and providing insurance coverage against various risks/claims supports all sectors of the economy. Thus, it provides the security and safety of the community and its people. In recent years, usage of information and communication technology as a centerpiece of global developments is undeniable and causes to expedite things done. Nowadays, in any business, such as e-banking, e-learning and e-insurance we can find the signs of IT and Internet as a key tool, make it possible to use effective and efficient utilization of information within the organization.

An important application of information and communication technology, the use of these technologies for re-engineering: the architecture of the insurance industry, increasing the speed of access to information, greater efficiency and better service to the customer. The ICT has developed an electronic insurance. Other major usage of ICT is in the service sectors such as banking, insurance, marketing, trade, education and tourism cause a lot of advantages for them.[9]

Applying information and communication technology in the insurance industry for rapid access of information and use it for decision making and planning is essential. So, a lot of developing countries are trying to code and implement electronic insurance projects, adapt to the realities of the new environment and benefit from its advantages. In fact, if the insurance plan is designed and implemented so efficiently and purposefully, the public and private sectors of insurance industry have profound institutional reforms.

Insurance services are sensitive to information, which means that the flow of information between different parts of customers and insurance companies is necessary. ICT is emerging as a phenomenon with its own attractions and has an important role in insurance market. Development of e-trade makes insurers more than product orientation to customer orientation. Since search costs for policy holders is less, Transparency in pricing, products quality and insurance services increases. The usage of ICT in insurance industry increases production capacity, specialization of activities and improves speed and quality of services. In general perspective, electronic insurance provides customers access to insurance services by using safe intermediates and without physical presence.

According to another definition, e-insurance is application of information technology and redesigning business procedure in order to provide optimal insurance services and facilitating inter-action between people and insurance industry. E-insurance is divided into two areas. The first area offers the electronic services in a way that removes the barriers of traditional methods and replaces them with easy access methods. The second area involves the simplification and improvement of business process and insurance operation in a way that reduces the operational needs and expectations of insurance industry. The Internet provides an opportunity for insurance companies, recently entered this market to avoid costly and lengthy process of traditional sales network. It should be noted that the sale of insurance products via the Internet- especially for complex insurance products with high value that need some advices and information- is inappropriate.

With e-commerce giants impacting the way consumers shop for insurance, one of the biggest trends has been the adoption of multiple channels by insurers to market and sell their policies. Technology now allows insurers to move from the traditional broker scenario towards a direct-to-market approach cutting out the middleman and going straight to the customer.[10]

**E-Insurance and Its Role in E-Commerce:**

General meaning of e-insurance is the use of internet and information technology to produce and distribute the insurance services. And the specific meaning of e-insurance is, providing insurance coverage through an insurance policy, in which all request, proposal, contract, negotiation will be performed online. Although paying insurance premium, distributing insurance policy and process of paying the claim can be done online, in some countries, regulatory and technological restrictions may not allow doing quite electronic operations. Internationally, however, in order to support the paying insurance premiums and online distributing insurance policy, regulations are modifying continuously. The accepted impacts of e-insurance on the efficiency are included:

1. E-insurance will reduce managerial and administrative costs through the process of business automation, and will improve the managerial data.
2. E-insurance, by selling insurance policy, directly will reduce commission paid to middlemen.

## XII. Penetration of e-commerce in the Indian Insurance Industry:

The first stage of buying decision making process in online industry is too aware about the requirement of purchasing the insurance policy through online. Consumers search from different insurance companies for products that they are willing to purchase. They evaluate the various products from different companies to determine the one that best suits their needs.[11]

The insurance company then conveys the terms and conditions of the insurance policy to the customer and the customer responds with details including a description of the entity being insured, the terms and the duration of the insurance policy. When both the customer and insurance company agree to go ahead with the transaction, the buyer pays the initial premium to the insurance company and the policy certificate is sent to the buyer. The post-sales phase of e-insurance is however considerably different from e-commerce. In ecommerce, human intervention is required for activities in the post-sales phase such as repair or replacement of parts. However, a major interaction between an insurer and the insurance company occurs in the post-sales phase if the insurer submits a claim for the amount insured. Online claim settlement involves complex interactions between the insurer, the insurance company and possibly legal and judicial authorities and, in an automated environment, requires close interactions between humans and automated agents. This phase is therefore the most difficult to implement over the Internet and online insurance sites mostly rely on human intervention for this phase.

**Advantages of E-Insurance:**

In general, e-commerce involves any kind of business or economic activities such as buying, selling, transferring or exchanging products, services or information those are performing through electronic connections. Most of discussions in e-commerce is limited to internet, which primarily is related to the electronic commerce. Nowadays, the internet and e-commerce has brought about fundamental changes in the methods of business.[12]

In recent years, due to the rapid growth of information and communication technology, and above all, the development of internet, the process of these variations has been accelerated. Since the new millennium, insurance companies throughout the world are actively presenting their services to e-insurance, particularly internet. E-insurance is the result of evolution in communications and information technology, in other words, it is an insurance operations, which are performed by using internet. The style of life and work are influenced by increasing demand of accessing to internet in order to receive information and services, therefore, the insurance companies could not be indifferent to these requests. The insurance companies could take advantages of new information and communication technologies to provide better services. Meanwhile, e-insurance will reduce the real-time of activity and management costs.

The advantages and benefits of e-commerce based insurance are investigable from three perspectives of “insurer”, “under contract agencies”, and “policyholder”:

1. ***The advantages of insurer-***
   - More speed, in the process of issuing insurance policy and getting damage.
   - Increasing the accuracy in the insurance activities.
   - Upgrading mechanized insurance system, according to the latest hardware and software facilities.
   - Eliminating costly and time-consuming stages, such as issuing letter of introduction, inquiries from centers.
   - Reducing the office space of insurance companies through developing virtual space.
   - Encouraging policyholders to further use of insurance affairs through a perfect informing.
   - Attracting organizations to contracts with insurance.
   - Retaining policyholders and current contract centers.
   - Facilitating the insurance affairs such as documents, reporting.
   - The possibility of further controlling and managing the affairs of insurance.
   - The possibility of intelligent performing of some insurance processes such as introducing the policyholder to the medical centers, only by phone or internet.
   - Inhibiting fraud and forgery.
   - Exact analyzing the costs.

2. ***The advantages of under contract companies-***
   - The possibility of rapid identifying insurance coverage.
   - Reducing the time repayment to the Center, from insurer.
   - Inhibiting offence and fraud.
   - The possibility of issuing special insurance policies in Center place without referring to insurer.
   - Rapid identifying the policyholders.
   - Increasing the clients in order to use provided facilities.
   - Rapid identifying letter of introduction.
   - Reducing the administrative costs of the above mentioned centers in order to communicate with insurer.
   - Increasing the rate of interaction between institutions and insurer affairs.

3. ***The advantages of insurer-***
   - Increasing the rate of identifying actual insurer.
   - Reducing the frequency of actual presenting in the branches of insurance.
   - No need to manually completing forms.
   - The possibility of observing the information of insurance policies related to the policyholder.
   - No need to providing a letter of introduction.
   - Ease of paying and receiving related funds.

- Reducing the time and the cost of using insurance coverage and the resultant satisfaction.
- Increasing familiarization with the insurance affairs by insurer website.
- The possibility of taking insurance free consulting through accurate informing of insurers website.
- Possibility of direct communicating (virtually) with the managers and administrators in any time and space.
- Instant access to statistics and thereby quickly producing reports.

**IRDA guidelines for e-insurance policies:**

The IRDA has stated that the main aim to initiate the insurance repository is to help the policyholders revise, modify, or change their plans in a correct and quick manner. According to the guidelines, the providers of e-insurance policies will need to avail the services of authentic repositories and the e-policies will also be regarded as legitimate contracts. For an insurance repository to be regarded as certified, it should have a minimum net worth of INR 25crores sans any investment from outside India. Also no single insurance company should own more than 10 percent of its stakes or enjoy a managerial position in an insurance repository.[13]

The IRDA has also made it mandatory for the insurance repositories to take steps that will make sure that all crucial information will be adequately safeguarded and there will be effective systems that will prevent any misappropriation of deals and records. The guidelines also state that insurers can make deals with more than one insurance repository to make sure that e-insurance policies are properly maintained.

**Latest Trends in the Indian Insurance Sector:**

The insurance industry has experienced immense changes in the past few years and the challenges are expected to intensify in the coming years. Insurers are expected to focus on customer centricity, reducing costs and improving service standards.[14]

*The latest trends seen in the insurance industry are as follows:*

1. **Online insurance:** Over the last few years, the shift to online insurance has brought to the customer a large number of protection and savings solutions that were not available earlier. Connectivity and the shift to mobile e-commerce will soon play a significant role in the sector. Increasing use of mobiles and mobile apps is impacting how companies conduct business and interact with stakeholders. This is also why online insurance is the focus area for the future.

2. **Big data and analytics:** Big data and analytics provide valuable and actionable insights. Big data plays an important role in risk management, enabling companies to analyze risk characteristics and claims statistics. Big data helps companies monitor brand reputation by analyzing comments in social media. By doing so, companies can immediately address issues that may damage their reputation or brand.

3. **Training insurance agents:** Agents are one of the trusted channels for selling insurance products. Insurers are increasingly investing in training and education of agents in order to enable them to deliver better service to customers.

4. **Social media and collaboration:** Social media is about helping people connect. Social media platforms such as Facebook, LinkedIn and Twitter, are frequently used in marketing to drive brand awareness and connect with customers. These platforms can also be used to improve collaboration, decision-making and processes both within the company and in interacting with distributors.

5. **Distribution channel management:** In a multi-channel world, existing distribution channels remain as new channels emerge, complicating channel management. Today they are managed as discrete distribution channels unable to integrate for seamless interactions. Different elements of insurers' communications are shifting at different speeds and older channels are not going away. This increases the burden and confusion for insurers, who are required to invest in supporting new channels without being able to shutter older channels.

**E-services offering by Insurance Company:**

The company’s success is promoting the products depends on understanding the needs and wants of the customers. There must be compatibility between the products and the requirements of the insurers. A decade back, penetration of products have been made through excessive promotional strategies especially advertisement. Even those advertisements can have broadcasted less frequent and time bound. Advertisements are made either through passive channels like newspapers, magazines, billboards, radio and television, or, through active channels like human insurance agents. At present the policy is tailor-made to the needs of the buyer. E-insurance employs the Internet to reach customers through advertisements more effectively. Lot of advertisement banners, pop-ups and road blocks occupied significant portion in the online marketing to grasp the mind of the customers. Companies and insurance agent can contact the clients through email to answer the queries about the products. The home page of the company provides company’s profile which facilitates the customers to make decisions. Now Insurance companies offering e-services to their clients. It can be classified into the following categories:

1. ***Webpage:*** The insurance companies have a separate web page for promoting their online insurance services. The webpage will provide almost all the details about the products and the features, reason to buy, duration of the policies, sum assured and assumed bonus, etc., this online facility will maximize the strength of the company to move further in the minds of the customers. LIC is a public sector company provides all the details about the products to the customers.

2. ***Power shifts from seller to buyer***: Unlike traditional marketing, the power has been transferred to the buyer, will help them to know, analyze, and make decisions based on the alternatives of policies.
3. ***Greater transparency***: Companies are maintaining greater transparency can be maintained in disseminating product details through the websites. Customers will know about the new arrivals of products and the changes in the policies time to time.

4. ***Middlemen:*** Middlemen are intermediaries who do not sell the insurance policies directly but they help the potential customers of the insurance companies for choosing the products.

5. ***Aggregators:*** Aggregators have own sites that will help the clients to know the variations between the policies will be given. Moreover they will give some additional information about the products.

## XIII. Customer Relationship Management and E-commerce in the Insurance Industry:

E-commerce and the internet are increasingly becoming one of the most important drivers of strategic change for business and national governments. A body of research specifically focused on the use of E-commerce in the insurance industry shows that the adoption is positively related to increases in productivity. Yet, the insurance industry has been lagging behind other financial services to embrace this new change within its activities. Most insurance organizations recognize that web services and electronic collaborations are the key buzzwords of today's organizations, but the bulk of the job in many firms is still done via manual paper-based processing. For example, customer orders are still received via old methods, and the process for handling these documents is time consuming, wrong and unnecessary.

The result is that customers maintain relationships with several companies and finish contact quickly if they are not satisfied with quality of service. Efficient insurance markets are essential basis for the transition countries to achieve integration into global economy and sustainable strong economic growth. Insurance market is a vitally important economic institution where mutual beneficial exchange between consumers and insurance companies is carried out. The information intensive nature of the insurance sector affects all the activities of the value chain, which are based on the ability to process information efficiently. For this reason, investments in E-commerce, which represent almost all investments in technical capital, affect productivity more than in other sectors. Furthermore, contacts between the insurance company and its customers are rare because the contracts are by nature long-term and promissory. So far, insurance companies only offer value-added services to support their customers in the moment of truth, that is, after a loss. As a consequence, customers have a second thought, whether the buying decision was right while 'nothing happens'. These added services are a promising approach to keep customer relationship alive in the insurance business by vital interaction. Where these technologies were put in place, they have actually proved to be a promising approach to intensify the customer relationship in the insurance business.

**Indian Insurance Sectors and Information Technology Needs:**

The insurance sector in India is nearly 150 years old. It is now in the third phase of its existence. The first phase was the long growth phase before the two nationalizations in 1956 and 1971 of life and general insurance respectively. At that point of time, there were more than 200 life insurance companies and 108 general insurance companies. They were all private sector insurers with the exception of one state-owned general insurer. Several overseas insurers were operating in India through branches. In the second phase, the entire sector became a state monopoly. In the third phase, we now have several new private sector players competing with the large public sector insurers.[15] There is an evolutionary change in the technology that has revolutionized the entire insurance sector. Insurance industry is a data-rich industry, and thus, there is a need to use the data for trend analysis and personalization. With increased competition among insurers, service has become a key issue. Moreover, customers are getting increasingly sophisticated and tech-savvy. People today don't want to accept the current value propositions, they want personalized interactions and they look for more and more features and add ones and better service. The insurance companies today must meet the need of the hour for more and more personalized approach for handling the customer.

Today managing the customer intelligently is very critical for the insurer especially in the very competitive environment. Companies need to apply different set of rules and treatment strategies to different customer segments. However, to personalize interactions, insurers are required to capture customer information in an integrated system. With the explosion of Website and greater access to direct product or policy information, there is a need to developing better techniques to give customers a truly personalized experience. Personalization helps organizations to reach their customers with more impact and to generate new revenue through cross selling and up selling activities. To ensure that the customers are receiving personalized information, many organizations are incorporating knowledge database-repositories of content that typically include a search engine and let the customers locate the all document and information related to their queries of request for services. Customers can hereby use the knowledge database to manage their products or the company information and invoices, claim records, and histories of the service inquiry. These products also may be able to learn from the customer's previous knowledge database and to use their information when determining the relevance to the customers search request.

**Effect of Information Technology *(E-commerce)* in Insurance Sector:**

- ***Client Data:*** Insurance carriers maintain accurate and updated client data records. Information technology must be both secure and comprehensive enough to store multiple names, addresses, telephone numbers, email addresses and other pertinent details.

- ***Policy Details:*** For those insurance companies providing policies across multiple lines of insurance, information technology requirements become even more complex. Details of each insurance policy, ranging from life, home, auto, boat, liability and business products, need to be accurately recorded and merged with client data.

- ***Claims Management:*** Investigating, paying and recording claims data is crucial to any insurance company's financial stability. Information technology plays a vital role in allowing carriers to record claims details and share data with police, other carriers, attorneys and beneficiaries. Advanced computer software ensures important information remains accessible and updated.

- ***Beneficiaries***: Life insurance companies utilize database technology to record policy owners' beneficiary designations. Aside from the personal details of the insured individuals, beneficiary names, addresses, telephone numbers and death benefit portions are of monumental importance.

- ***Payment Information***: Perhaps the most essential area requiring accurate and efficient information technology is an insurance company's client payment details. Above all else, billing and invoicing systems generate the necessary revenue to keep the company in business. Cash flow remains vital to daily operations and without superior information technology and processing systems, the carrier's financial stability is at risk.

- ***Actuarial Analysis***: Insurers base their rates on actuarial models that seek to determine what risks are more or less likely to experience a loss. Insurance companies are using technology to analyze years of claims and policyholder data searching for correlations between risk characteristics and claims. Technology has allowed actuaries to analyze risk at a much more precise level of granularity.

- ***Policy Administration***: Most insurance policies are still printed and delivered to policyholders by mail each year. The process of creating these documents used to be accomplished by armies of clerks, technicians and typists. In most cases, this repetitive task has been completely re-imagined using technology. Customer data is maintained in massive databases, where it is accessed by computer systems that automate the renewal of each policy. Policies are assembled using complex software packages and printed using advanced high-speed printers.

- ***Automated Underwriting and Rating***: Every insurance policy undergoes an underwriting process that determines if the insurance company is willing to provide insurance. If the risk is acceptable, it is then rated, to determine the price the company will charge. Once the purview of highly trained underwriters and rating technicians, this process is now automated, with only the most unusual risks requiring personal attention.

**Emerging Challenges to Enhance Technology in Insurance Sector:**

The major challenge staring at Insurance sectors in India relates to the need to introduce innovative, customer friendly products and services for which newer technologies have to be brought in multiple areas to reduce the overall transaction costs. Traditionally, efforts in technology driven IT implementation has targeted the metros or big urban customers. The time has now come to make the benefits of IT penetrate to the rural population as well. There may be also a need to provide for multi-lingual facilities, which is a migration from the existing English-only paradigm, in a manner akin to some of the other countries like China, Korea and Japan. If these benefits have to accrue, it will be necessary to have adequate infrastructural facilities. Efficient and effective communication networks hold the key to success in attaining the desired results of network based IT usage for transaction processing systems of insurance sectors. The need to train and retrain staff on a continuous basis given the fast paced changes in the technical sector.

**On-line Insurance – Current Scenario:**

Most existing insurers started selling online in 2010-2011 and at present, almost close to 33 insurers are offering more than 1000 products online. A majority of them are currently focused on term insurance but many brands are looking beyond just distributing transactional products like term insurance and car insurance. They are considering the Internet as a channel of the future which will make significant contributions to business and growth. Three insurance companies, which have included Internet and online aggregators as a major focus in their distribution strategy.

The online insurance industry in India is witnessing a phenomenal level of growth for the past few years. Indians were already aware of the online platform to fulfill their educational and banking needs until sometime ago. When it came to investments, fixed deposits and mutual funds were the most preferred purchases. On insurance front, people started relying on internet to research about the kinds of products. However, with each passing year, digital insurance industry gradually expanded its footprints in India. And therefore, online mode is not limited to just research and life insurance comparison.

In today's scenario, Indians are no more afraid to purchase online protection policies. They buy, renew, make payment of premium online and even avail post-purchase services. Going back in time, insurance sector started to penetrate the digital platform in the year 2005. Everything began with the concept of online comparison and research of insurance policies and this was made possible due to some web aggregators. Web aggregators provided extra comfort to buyers by letting them compare policy online. Though, it was never easy to persuade researchers to buy policies through online mode. Nevertheless, transparency and safe payment gateways influenced more than half of the researchers and appealed them to make a purchase. Insurers also recognized the imprint online mode had made on the minds of consumers and therefore they initiated to promote online term insurance quotes and policies. In 2010-11, most of the insurers started selling online. And at present, insurers have made online mode a priority in their distribution strategy. Though, many insurers are still focusing on term plans, but a few of them have moved ahead beyond term and car policies.

## XIV. Conclusion

The electronic economy will force change within nation states. The modern nation state remains the most prevalent unit of governance in the developed and the developing world. For the growth of insurance sector there has to be a conscious effort by the management towards making it customer oriented. Major challenge staring at Insurance sectors in India relates to the need to introduce innovative, customer friendly products and services for which newer technologies have to be brought in multiple areas to reduce the overall transaction costs. Trading electronically offers a number of advantages to companies. The online insurance industry in India is witnessing a phenomenal level of growth for the past few years in india. Today indians are no more afraid to purchase online protection policies. Traditionally, efforts in technology driven IT implementation has targeted the metros or big urban customers. The time has now come to make the benefits of IT penetrate to the rural population as well.

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