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Abstract : Indian insurance sector offers great potential for growth. The low insurance penetration as compared to the world average provides a plethora of opportunities for this industry. These opportunities can be exploited only by the adoption of technology and digitalization in this growing industry. The main purpose of the paper is to describe the constraints restricting the progress of Indian insurance market, which can be overcome by the use of new-age technology like social media, internet-of-things (wearable electronic devices, environmental sensors, telematics, AI). These technologies offer useful insights to the insurance companies into a customer's environ0ment. This real-time information helps in customizing premiums, easy & quick claims redressal, and timely detection and prevention of risks. The paper studies the initiatives taken and technology implementation done by a few Indian insurance companies (InsurTechs) towards digitalization that is applicable across the complete insurance value chain. Moreover, a few challenges like privacy of data need to be addressed by the Indian insurance sector before implementing the technology.

The insurance industry in India is undergoing multiple disruptions in its functioning, with the expansion of digital footprint. According to CII-PwC 2017 report on 'Evolving considerations for the Indian insurance industry', "Global average investment in digital technologies is increasing over the years, while the insurance industry in India is lagging, both in its level of digitalization and its ability to realize financial returns on its digital investments." Of late, the Indian insurance industry is getting intensely impacted by the penetration of digital technologies across the globe. These technology advances will have widespread applications across different stages of the insurance value chain including sales, underwriting, claims, and customer service.

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Dr. Alka Suri* & Pankhuri Sinha** Indian Insurance Market

Traditionally, a customer would search for policies meeting his requirements and most prominently life insurance and motor insurance. These policies were available through channels like agents, brokers, and insurance company offices. He would then evaluate a few policies offered by the insurance agent based on his requirements and the premium to be paid. Once the traditional insurance customer chose the policy, he would largely continue to use the same insurance provider without trying to search for other options available in the market. This was the traditional policy distribution scenario.

The year 2005 saw the beginning of the digital era in Indian insurance market with people searching and comparing insurance policies online. Despite the increase of smart phone proportion and ease of internet access, the insurance penetration (a key global benchmark to measure the level of development of the insurance sector) has increased marginally from 3.14% in 2005 to 3.49% in 2016. A decade after, insurers have begun selling policies online.

In an annual conference of insurance brokers in January 2018, IRDA Chairman, Mr. TS Vijayan said - "The Indian insurance sector is set to witness significant growth as well as regulatory challenges from the growing digitization and technology adoption." He wasalso quoted as saying, "Pricing (of insurance products) will be better, and "products needed for customers will be coming out of analytics platform". Though, the industry is all positive about the unprecedented modernization, more focus is required in the direction to deal with the current needs of this sector.

Digital Technology—A Solution

The insurance penetration in India is below the world average (3.49% against global average of 6.3% in 2016) despite the fact that the insurable population is forecasted to reach 750 mn in 2020. The industry is burdened with burgeoning customer acquisition costs, high customer churn that leads to lower retention, and cutthroat competition among players who want a larger share of the customer's wallet. The digital technology must support insurance providers in dealing with these problems hindering the growth of the sector.

Customer acquisition cost

Customer acquisition refers to the process of converting prospects and inquiries to new customers by persuading them to buy the company's products and services.

According to the IRDA Annual Report 2016-17, the operating expenses of the public sector insurers, private general insurers, standalone health insurers and specialized insurers increased by 2.47 percent, 18.59 percent, 21.43 percent and 21.33 percent respectively over previous year. This increase causes erosion of profits of the insurance companies and is detrimental to the economy.

Customer Retention

High rate of attrition among customers translates into too many policies being returned or lapsed, way before they enable adequate premium income for the insurer to become profitable. Customer retention is of critical necessity especially as acquisition costs are increasing. The digital route should focus on transforming operations to enhance customer loyalty. Loyal customers tend to remain with the company for long, are more inclined to buy from the same company and end up promoting and recommending the company by word-of-mouth. The digital channel should be such that interacts with the customer regularly in each cycle, be it for making premium payments or renewals; providing better value-adding options and enhancements; or simplifying claims procedure.

Share of Customer's Wallet

It refers to the proportion of the customer's total spending that a business captures through its products and services. Insurance players are more interested in increasing a company's share in the customer's wallet than increasing the company's share in the market, to bolster revenue. However, this remains a farflung proposition in the absence of analytics and insights that are dependent on digital technology.

The Road So Far

Mobile phones, smartphones and mobile apps

The significant technological advances in the telecom industry, which has resulted in revolutionizing the insurance sector, is the smartphone, mobile broadband introduction. The mobile internet penetration in India in 2017 was 23.97%, which is set to increase to 34.85% in 2022. As per a report by Internet and Mobile Association of India (IAMAI) & market research firm IMRB, the rate of growth of mobile internet users in rural India is more than in urban India. Businesses are designing special mobile-based applications to tap the web traffic from mobile phone users. Apps and mobile internet have eliminated intermediaries enabling

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insurers to create a direct connect with the customers. Moreover, mobile e-wallets have not only helped urban financial transactions but have also addressed lack of financial facilities in rural India.

Healthcare platform provider Practo, has collaborated with ICICI Lombard to offer a new insurance processing platform, Practo Trinity to offer cashless coverage for OPD visits using IL Take Care app.

Internet

A BCG report also states that the online insurance sales market in India will be around Rs. 11,000 - Rs. 15,000 crore by 2020, which is an increase of nearly 20 times. In April 2017, IRDAI started a web portal – $\underline{isnp.irda.gov.in}$ – that allows the insurers to sell and register policies online. This portal is open to intermediaries in insurance business as well.

Digitization

Digitization means the process of converting information into a machinereadable digital format. In India, the Insurance Regulatory and Development Authority (IRDAI), which had, proposed digitization of insurance policies in 2013 has now made it mandatory. With this initiative, the insurance industry is now all set to reach a new milestone. Dematerialization of policies is beneficial for all, especially for the policyholders, and this move made by IRDAI will bring greater efficiency, minimize costs, and bring more transparency in policy maintenance. Apart from providing safety of the policy documents, digitizing insurance policies will eliminate the need for supplying KYC and other supporting documents on the purchase of a new policy. It thus makes the process easier.

The Road Ahead

The insurance industry is a strong data-driven industry with huge volumes of both structured and unstructured data. The principal bases of the industry is estimating future events and measuring the risk/value of these events. The volume and variety of massive datasets provides multiple areas where digital technology can act as a boon for this customer-centric industry. New data sources like telematics, sensors, social media etc. pave way for much needed artificial intelligence, automation, data analytics (marketing analytics, loyalty analytics, and risk analytics) to improve customer interaction and to achieve higher predictive accuracy to determine risks and claims. RJPSS 2018, Vol. 43, No. 1, ISSN : (P) 0258-1701 (E) 2454-3403, Impact Factor 3,9819 (ICRJIFR) UGC Approved Journal No. 47405

Social Media

BCG Analysis shows that in India, insurers have less than 0.3-0.4 contacts per year and whatever little is there, it is focused on intermediaries. Social media provides rich information on customer profile, life stage, social behavior that can be used in actuarial modeling. It is the most inexpensive marketing tool that connects people. Leveraging social media tools can provide the right connect amongst insurance companies, consumers, and agents to collaborate and share information. It can help in improved decision-making and planning through active social listening.

Internet of Things

IoT refers to an interconnection via the internet, of everyday physical objects containing embedded technology like electronics, software, sensors, and actuators, to gather and transmit information. Traditionally, Indian insurers calculated premiums and made decisions about future contracts based on past data. However, with IoT devices that offers consistent and constant flow of real-time information about the insured, insurers can shift from their historical data analysis to new information analysis and come up with more useful insights. Insurers, to identify customer needs and risks can analyze the data collected through these devices. This digital technology has various implications:

Wearable electronic devices

Activity trackers like fitness bands, medical devices help track customers and predict risk assessment for their insurance policies. These wearable gadgets keep a tab on a person's health activities, record vital information such as calories burn, sleep pattern and heart rate, and help health insurance providers customize health insurance coverage and premiums. These devices encourage a person to lead a healthy lifestyle, which help them earn points thereby reducing their health insurance premium. Thus traditional health insurance premiums calculated the same risk for a health conscious individual as well as an individual with a sedentary lifestyle, but these devices have made an innovative difference by treating both differently.

Environmental Sensors

Environmental sensors like security systems, smart thermostats, water sensors, door sensors, smart lighting etc. can be installed in both residential and commercial establishments, on walls and roofs, to detect smoke, humidity, temperature etc. These sensors can give timely information to the owners and avoid losses before

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they turn big. The insurer can alert the insured about any leakage or cracks in the walls, making a win-win situation for both. A disaster can be avoided by the insured and a massive claim can be evaded at the end of the insurer.

Telematics

Telematics helps in moving from traditional methods of insurance to usagebased insurances. Telematics devices, mobile devices, and dongles are very helpful in auto insurance.

According to BCG-FICCI report, there are two emerging concepts in telematics - "Pay As You Drive" and "Pay How You Drive"

"Pay As You Drive" involves annual premium payment based on the distance travelled which means the more a person travels, the more premium he pays

"Pay How You Drive" model calculates premium based on the driving habits of an individual. A speedy and a rash driver pays more premium than a person who is a slow and safe driver who maintains distance, parks car cautiously and refrains from hard braking.

Both the above concepts can be recorded real-time with telematics, which is useful in pricing of auto insurance products and calculating discounts offered.

Artificial Intelligence

Automation of back-office business processes is not new but using artificial intelligence (AI) and applications changes the game altogether. Chatbots, roboadvisors, machine learning, computer vision, and natural language classification, increase automation leading to greater productivity. Recently, private general insurance company Bajaj Allianz General Insurance's has introduced chatbot 'BOING', an AI Chatbot service platform, on Amazon's cloud based voice service Alexa.

Indian Insurtechs

Indian insurance companies have embraced only a few aspects of digitalization like online insurance. InsurTech startups like 121 Policy (health insurance), Bimadirect, ET Insure, Gibi.in, Insure First, Renew Buy (auto insurance), and Turtlemint among others have entered the online space of distribution of insurance products in a safe, secure, and competitive environment. Tapping the online market is a big step towards digitalization but more needs to be done with respect to the above technologies discussed. The following InsurTechs are worth discussing as they have moved further in the digitalization space

GOQii

It a California-based fitness technology company with an Indian office in Mumbai. It offers a wearable fitness band paired with remote personalized coaching, but aims at becoming a health ecosystem platform to promote and prepare insurance plans that promote wellness instead of illness. It has partnered with Max Bupa Health Insurance for such plans

Touchkin

TouchkineServices Pvt. Ltd. is a Bengaluru based company that designs and develops Touchkin, an AI-based predictive healthcare platform that uses passive sensor data from patient's phone to track changes in behavior that indicate ill health. Its portfolio includes Wysa, an AI coach for behavioral and mental health; StayClose app that allows users to remotely monitor family's well-being

eKincare

Is an online platform run by Hyderabad-based Aayuv Technologies that enables users to monitor their critical medical information and view it anywhere anytime. It helps Insurance Providers understand the medical patterns and the various health risks amongst the Insurance Holders, and help them understand and predict the Medical Claims

Niki.ai

Niki is an AI company headquartered in Bangalore, Karnataka that built an AIpowered personal assistant named Niki, a chatbot that uses a natural language processing, and machine learning technologies to interact with customers through a chat interface. Niki is soon to expand into insurance chatbot, giving out insurance advice.

Arya.in

Creates AI systems that automate tasks and provides advanced AI tools to build robots that assist professionals in various fields.

The above startups offer products with the new technology but complete integration with the insurance providers is lagging.

Challenges

Ensure data privacy: The insurance providers must understand that there exists a very thin line between the benefits of technology and privacy of consumers. The industry relies on a large amount of authenticated customer information (for

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underwriting the risk), but it is the responsibility of the insurers to protect and use such information in a secure manner. Without proper safety measures, this data could be exposed to hackers and unauthentic sources leading to the breach of security.For instance, use of telematics for tracking the locations visited by a vehicle may help in assessing a driver's behavior for creating a customized policy, but a person may be unwilling to disclose such kind of sensitive information on daily basis, even if it results in a lower premium.

Manage errors of IoT connected devices: In an insurance ecosystem that is based on IoT connected devices, there can be errors that need to be controlled and mitigated. If a device malfunctions in time of a loss event, the assessment of the loss will not be correct and so specific procedures must be developed to deal with such situations.

Conclusion

It is high timethe insurance industry focuses on pushing the pace to digitalization and integrating it in the current architecture. The industry's future growth potentiallies in adoption and adaptation of digital technologies as a preferred means of doing business. Insurance leaders must transform themselves and invest in not only the new-age digital startups to help multiply their value creations but also in security devices to insulate sensitive information and avoid perforation of security. Digitalization opens up a plethora of opportunities to enable companiestoalign effectively their investment strategies with their business objectives but with caution.

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