

Health Insurance: Technology as a Key Growth Drive

by
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Abstract

The insurance sector in India has grown at faster rate after liberalization. Total premium is significantly lower than Asian peers, like South Korea, Taiwan, Japan and Hong Kong which boast an insurance density greater than 10%; growth potential remains promising. As a transaction-intensive industry, health insurance has benefitted, and will continue to benefit, from the efficiencies that technology brings to traditionally paper-driven processes. The industry is at a crossroads. It not only must improve existing processes, it must also develop new processes and capabilities to meet new customer demands. Health insurance companies consider technology as an enabler tool to respond challenges and opportunities. The business and IT agenda become interchangeable. Technology becomes a driving force for health insurers interacting with customers having new expectations like to be able to manage transactions how, when and where they want. This research paper is descriptive in nature and an attempt to through light on importance of technology in growth of health insurance sector.

Keywords: Health Insurance, Demands, technology

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1. Introduction

The insurance sector in India has grown at faster rate after liberalization. Total premium grew at a CAGR of 25% and reached total of \$67 billion, yet, Indian Insurance penetration, measured as ratio of premium underwritten to GDP was only at 5.2 % in 2010, significantly lower than Asian peers, like South Korea, Taiwan, Japan and Hong Kong which boast an insurance density greater than 10%; growth potential remains promising. As a transaction intensive industry, health insurance has benefitted, and will continue to benefit, from the efficiencies that technology brings to traditionally paper-driven processes. The industry is a crossroads. It not only must improve existing processes, it must also develop new processes and capabilities to meet new customer demands

Present position

There are between 800 and 900 million people in India who do not have any medical cover; expenditure on medical treatment is one of the constraints in poverty alleviation, expansion of universal health insurance can be a good intervention. The coverage of health insurance continues to be very low and only around 25% population receives any kind of health insurance (Choudhari, 2013). National and state wise health insurance coverage in 2010 was as follows: Source: Choudhary, 2013.

Challenges

Insurance awareness is lower especially in health insurance. The perceived value of buying insurance products remains low due to high expectations on returns to which other financial products normally offer and the belief that risk coverage is not needed. It makes insurance a push product rather than a pull product in India (<http://www.irda.gov.in>). Reaching out to the potential willing buyers and servicing them becomes challenge due to the scattered and spread population, especially outside the metros and Tier-I cities. The insurance industry faces challenges in acquiring and retaining internal and external channel teams considering the huge gap between the demand and supply of dependable and skilled personnel, resulting into high cost of customer acquisition and operations.

Rationale

Despite the unexplored potential, insurance companies will continue to be confronted by different challenges to achieve top-line and even in bottom-line performances. Apart from struggling to maintain growth, insurance companies are called upon to meet the ever increasing dynamic needs of price and service conscious insurance consumers, meet regulatory demands, enhance risk management capabilities, re-evaluate business partnerships and joint ventures, adopt new distribution models and build capabilities in more enabling but technology driven environment. Due to the challenges and threats, accessing the next phase of growth requires identification and better understanding of technology factor.

2. Literature review

Technological

Health insurance companies consider technology as an enabler tool to respond challenges and opportunities. The business and IT agenda become interchangeable. Technology becomes a driving force for health insurers interacting with customers having new expectations like to be able to manage transaction how when and where they want and Advances in software and hardware transform big and large data into actionable insights. As the insurance industry reaps productivity gains from wave of automation, new technologies are significantly enhancing operational efficiencies, revenue opportunities, and improving customer experience through growth in smart phones and tablets; cloud computing, constant access to internet, exploded increase of computing power and storage, enabling accumulation and analysis of large data and growth in active sensors and devices connected through internet (CISCO, 2011). Technology makes health insurance service-centric rather than server-centric architecture to create flexible, responsive and agile business models and capabilities. Analysts rated technology at 91 percent as either critical or important; current technology performance as poor and advised major improvement (<http://www.accenture.com>). Cloud computing has yet to make greater impact in insurance as many insurers are saddled with rigid and costly legacy systems that cannot be easily moved into more agile and responsive, commercial systems, business processes.

By 2020, different biotechnologies will be available at nano-scale, providing ability to embed devices and sensors unobtrusively within human body. Nanotechnology drug delivery market is expected to grow impacting health insurance Consumers will use personalized medicine to create highly customized unique healthcare solutions that actively change the body's biochemistry putting an impact on health insurance sector. Medical advances will flatten cost curve as mortality and morbidity rates are dramatically improving and reduce litigation costs as medical product manufacturers provide evidence on efficacy of drugs trial. Risk management trend is to deepen and expand. Carriers will move from passively identifying and pricing risk, and reactively paying claims proactively under strategic decisions using big data in simulation techniques, real-time sensor data,

unstructured data from social networks and multimedia (<http://www.fide.org>). In the US, 10percent of all property and casualty claims are fraudulent, yet only 20 percent of those are detected (National Insurance Crime Bureau, 2013). Data analytics can improve the situation. 49% expected new sources and techniques in data analytics to be the key competitive differentiator.

Suggestions

Key trends critical in next five years are: reflexive and appropriate IT security that identifies and prioritizes gaps and vulnerabilities. A risk-based approach to customer data privacy is to be adopted. Social platforms to drive business intelligence and create new customer channels should be used. User experience should be used as driver of new products, services and marketing (<http://www.insurancetech.com>). The key megatrends- technology is likely to influence health insurance sector as below:

Technological

Technology playing leading role on frontier of health insurance can help in detecting fraud. Card-based payment can drive speed and efficiency of transaction processing. As internet ensures real-time information and big data, insurers should exploit it for better pricing, underwriting, and loss controlling to have competitive advantage. Global investment in advanced analytical techniques is needed to develop capabilities to process large unstructured and multimedia data as continuous real-time video, life blogging and social chatter. Advances in artificial intelligence techniques, as machine learning, natural language understanding and intelligent decision-making should be used to advance transaction processing to decision-making. The health insurance industry must improve existing processes; develop new processes and capabilities to meet new customer demands by;

Cloud Computing: The Cloud can change health insurance scenario by moving at speed and scale to address new opportunities, improve responsiveness and enhance processes like, underwriting. It permits scalable faster quote processing and more accurate risk pricing. Cloud and digital mobile channels enables health insurer to 'stretch the walls' of computing capacities and respond to peak demands at lower cost. Insurers can master huge internal and external data to improve processes, enhance customer service, create products around customer and meet regulations through cloud where security and data privacy permit to maximize gain in productivity and profitability;

Architecture around Business Goals: The insurers are to move from architecture based servers to architecture built around service to achieve business goals. Data should be used as platform to be distributed wherever it is needed. The architecture should allow decoupling distribution from manufacturing to create more agile and flexible systems that respond faster to product development and launch of product factories. Insurers should provide product management staff with ability to configure products using various variable inputs; test them and decide to launch or abandon without referring supportive technical team. Front office systems can be aggregated and integrated to deliver seamless channel experiences to customers

Preventative Business Modeling: From reactive to preventative business model shifting needs to be ensured. Connected devices and sensors to develop and improve risk and loss management system to improve productivity are needed in health insurance industry;

Nano-technology Usage: Nano technologies, having potential to dramatically improve health outcomes through enhanced monitoring and preventive control over chronic disease be considered for envisioning health insurance sector (<http://www.researchandmarkets.com>);

Customized Health Care Services: Medical service and treatment model needs to be evolved towards customization of healthcare service to reduce cost and increase effectiveness;

Loss and Risk Management: Loss and risk management in health insurance needs more sophisticated risk modeling and innovativeness in structuring risk-sharing and transfer deals. Workable insights reduce losses and provide better risk management for good customer experience and competitive advantage. New sensing, monitoring

devices and technology, together with risk transfer mechanisms, coextend general health, cushion insurers and reinsurers against abnormal losses

3. Data analytics:

Data analytical techniques can be used for decisions using unstructured data as social media devices, video and audio. Complementing structured data should be ensured in strategic forward-looking decisions to achieve enhanced customer insight and more efficient business processes. Predictive and behavioral analytics integrated with business processes can address changing customer behavior. Service product innovation becomes more effective and faster when analytics are in the mix. Data analytics can assess likely take-up of health insurance product. It can model the impact of price changes and different features; and create real-time insights; fine-tune service products; and detect fraud in claims. HealthCare organizations are increasingly using analytics to consume, unlock and apply new insights from information. New methods of analytics can be used to drive clinical and operational improvements to meet business challenges. From a traditional baseline of transaction monitoring using basic reporting tools, spreadsheets and application reporting modules, analytics in healthcare is moving toward a model that will eventually incorporate predictive analytics and enable organizations to "see the future," create more personalized healthcare, allow dynamic fraud detection and predict patient behavior.

4. Implications

It implies that insurance is risk minimizing and mitigating financial product. Awareness and financial inclusion especially in health care insurance is increasing due to IRDA. Technology is playing a dynamic role in health insurance sector. Demand and supply in health care insurance both are increasing in favorable environment but a lot is to be still covered.

5. Technology in future

Electronic Health Records is a safe and confidential record of care that nurses, doctors, nurse practitioners, other health care provider, and clinical office staff use to manage and document health care assessments, interventions, and treatments. Electronic Prescribing gives prescribers the ability to write and instantly send prescriptions directly to your pharmacy without the limitations and errors of paper prescription, such as legibility, allergy, duplication, and other problems. These systems may be having an ability to check whether your insurance covers the prescribed drug, and even recommends substitutes (<http://www.nursingworld.org>). Radio frequency identification technology tracks patients throughout the hospital, and links lab and medication tracking through a wireless communications system. It is neither mature nor widely available, but may be an alternative to bar coding.

6. Conclusion

Technological factors have an impact on health insurance but not all changes will affect insurers positively. Forward-looking health insurers in developed countries are likely to grow in local markets by exploiting socio-demographic, technological, economical, environmental, ecopolitical, administrative advancement and simultaneously targeting emerging markets for growth by reshaping health insurance products for local markets while expanding on globally by building technical expertise and real time working. The pace and nature of growth is to observe changes in behaviors and dynamics of demand and supply; demand is increasing and supply is playing market making role. Growth comes at a cost; private insurers have to incur high expenses in increasing health insurance need-awareness, developing brand strength, establishing distribution channels and setting-up branch

net-work and other infrastructure like on line sale-purchase facility. Insurers' plans of obtaining break-even within first 7 to 9 years of operations are burdened with threats and challenges.

Three basic sets of tools can be applied to health care industry: Internet applications; enterprise systems; and mobile technologies. These tools can be used by health care organizations to store internal organizational information based upon its different business modules, including finance and accounting, human resources, payroll information, etc. Healthcare organizations can use these numerous technologies to provide better patient care, by not only obtaining more information from patients, but also giving more information on self-care and disease management to patients.

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