Life Insurance Transmission through the Digital World: Harnessing Innovation Value

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Introduction

The overwhelming nature of technological innovations is altering the landscape of every form of business including life insurance. The resultant effects of technological changes are causing the entire value chain of the businesses and industries to undergo transformation across planning, product development, distribution, communication and customer service. The impact of contemporary innovations brought in by technology in the domain of life insurance is also immense. However, technological innovations are known to upend the business models, thereby requiring a proper framework to assess their impact, complexity and other repercussions before their deployment. Although, life insurers are known for employing technology only as an enabling factor, in the current scenario, the overarching character of innovations needs to have a regulatory sandbox mechanism so that careful iterations protect the customers' interest and enhance the enterprise's value in the life insurance sector as well. Secondly, to develop an approach that fulfills the aspirations of the technology providers and the insurance community as a whole, and lastly to employ the innovation process as a catalyst for furthering life insurance intermediation

Life Insurance Sector: Tryst with Technology

The life insurance business in India has passed through three distinct phases of development. Traditionally the 'tied-agents channel' had been a powerful medium for distributing the life insurance products; however, with liberalization of the insurance industry, the new entrants, especially banks, gobbled up the markets with their already existing manpower, systems and procedures with minimum effort and maximum ease. This is popularly known as the “bancassurance” channel, and, in the recent times there is an upsurge of interest among customers to buy insurance cover through the digital medium. For the requisite adjustment in the various phases there was a need to align the sector with the demands of the changing market structure and customer expectations. Life insurers quickly adapted to the changing environment with new

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forms of distribution so as to cater to the markets effectively. In their quest of expanding the market, much of the change process was supported through efficient and diligent use of technology.

Thus, in all the phases of transition and to cater seamlessly to the customers, technology helped the insurers in (a) making the processes leaner, (b) taking informed decisions supported by data, (c) avoiding the necessary but cumbersome paper work and, (d) in eliminating/minimizing the load of physical record keeping pertaining to each policy. Since life insurance contract per se is long term in character, the preservation and retrieval of records is at the core of the business. Thus, from the initial punch-card system to today's cloud-based computing, the life insurer's technology journey has indeed come a long way.

The Advent of the Insurtech

Although, technology has greatly aided in re-purposing and re-engineering of the old processes and systems, thereby assisting the transition with the progress of time and technology to be in tune with the needs of the clients' expectations, life insurance business has now to face the onslaught of multiplicity of technological innovations and their acceleration in the market. The mindboggling range, scope and scale of such innovations have implications on the life insurance business, especially their capability to provide efficient solutions, to develop new products, to innovate efficient distribution systems and to introduce novelty in servicing.

Further, it is a challenge for the incumbents to choose the appropriate innovation and, adapt and assimilate them into the existing systems, given the diversity of bases and legacy technology platforms. Thus the problem of marrying different technologies resurfaces. With the advent of technology startups called Insurtechs a dedicated innovation is being brought to the life insurance table. The technological innovations that have wider implications specifically for life insurance business can broadly be categorized into:

- ***Customer Development Innovations***

This is a key area where the innovators are focused since they want to provide an integrated view as opposed to the traditional/disjointed view to the customer by using wide ranging technological solutions so as to properly assess the risks and the pricing of covers. By identifying the distinct customer segments, the technological innovators are keen to offer solutions based on: (a) identifying who are the customers (b) identifying their genuine needs, (c) specifying newer ways to reach and engage them, (d) designing activities needed to deliver the experience, (e) assessing the available resources, and (f) entering into collaborations.

i. Technology is very much evident in the overall life insurance buying process. Shifts are visible in how insurance is being purchased (behavior), through whom (distribution), where (online, offline) and the influencers in the process (comparison, reviews).

ii. Power is shifting to the customer. The results of a study by NBER (Brown and Goolsbee, 2000) suggest that growth of the Internet has reduced term-life prices by 8 to 15 percent and increased consumer surplus by $115-215 million per year, perhaps more.

iii. The Internet has significantly reduced search costs by allowing consumers to engage in low-cost price comparisons online and also with the insurers of their choice.

iv. Technology has helped in raising awareness about life insurance. Moreover, other complementary assets in the larger domain are offering ease of on-boarding and authentication.

- ***Distribution or Market Development Innovations***

These type of innovations aim at developing a product-market fit. The strategy is to find new market segments for the current products.

i. The rise of Robo advisors for life insurance products are becoming a reality. These have the potential to disrupt the traditional insurance distribution pipeline. It is expected that over the next decade and beyond, emerging technologies, such as cognitive computing, will power major advances in robo-advice capabilities.

ii. Reaching out to the underprivileged and the underpenetrated markets and meeting latent risks through innovative and smart contract technology would be in vogue. The smart contracts powered by a block chain would have far-reaching applications in record keeping and protection against tampering. These would be beneficial for designing robust insurance contracts.

iii. Peer-to-peer (P2P) insurance is an idea that allows the insured to pool their capital, self-organize and self-administer their own insurance. This scheme is currently under evaluation. The core idea of P2P is that a set of like-minded people with mutual interests may group their insurance policies together while at the same time reduce costs (e. g. startups such as #lemonade, #friendsurance)

iv. New ways of engagement with the customers.

v. Portability of policies.

- ***Service or Process Development Innovations***

The service/process development innovations focus on (i) digitization of all business processes; (ii) the blending and integrating of products and services, (iii) evaluating the considerations for sustainability, and (iv) the utilization of the distributed or virtual teams.

In this context:

i. The current regulatory environment is already favorable to the customer with various acts, regulations and guidelines to protect the interest of the policyholder. There are proper benchmarks related to servicing aspects and online grievance redress platforms that have increased the accountability of the insurer.

ii. Technological innovations that create unique user experiences and interfaces that have largely been welcomed by the insurance community.

iii. Complementary assets, such as online banking and payment technologies, have relieved the customer from waiting in long queues and delays in payment of premiums.

iv. Technological innovation has brought in transparency, and, customers have been empowered with policy-related documents in verifiable, digitally signed and dematerialized form and are provided access to update certain information regarding their contact details and registration of requests for servicing purpose.

v. Based upon the proprietary data, one can conduct surveys and analysis for new products and process development and generate better insights for decision making for underwriting and pricing of risks.

Risk Modeling or Solution Development Innovations

Due to the lack of insight on the impact and influence of different types of incidences in human existence, the insurers could not provide actuarially fair pricing for different types of risks. However, today with the possibility of data and conceptual modeling, one can fairly predict what would be the strain on claims if a certain incidence of a catastrophic nature were to occur.

i. Technological innovators are now benefitting from 'Open-Data' solutions. The willingness of major institutions and governments to share the available data could give a fillip to furthering the use and analysis by researchers and modelers. The data sharing facility is possible on (i) environment and climatic conditions, (ii) demographic variables, (III) public policy initiatives and (iv) implementation, among others.

ii. The innovations in modeling risks have helped to quantify the potential risk factors with help of data included in the models that provide an accurate information on risks to underwriters on a case-to-case basis and help to quantify the actual price of the risk to be covered.

iii. Risk modelers are now using the given data in innovative ways for unearthing new insights, which had never been actually used before. They are also gathering and combining long-term historical data and overlapping the same on other factors of concern and are coming out with workable solutions.

The following functional areas in life insurance have influenced innovative technological diffusion.

Life Insurance : Functional Area	Innovation Diffusion
Premium Billing	Cashless payment systems and invoicing
Inter-Office Communications	Email, mobile communications (text)
External Communication	Live chat, co-browsing and tele-support
Record Management and Retrieval	Document management systems
MIS	Data warehousing, mining, analytics
Work-Flow Management	Portals and trackers
Knowledge Management	E-books, intranets, digital documents
New Business Management	Straight-through processing; rule engines
Claims/Benefit Payment	Electronic system of payment
Performance Management	Access to micro sites, dashboards
Authentication and On-boarding	Biometrics, dynamic token
Procurement Management	Online auctions, e-tendering
Risk Management	Simulation techniques

The Paradigm of Innovation

An innovation is the result of research and consequent implementation of a new or significantly improved product (goods or services) or process. It involves introducing a new marketing method or a new organizational revamp in business practices and workplace reorganization or human resource management or in the conduct of external relations. Innovation plays a key role in the economy and society by contributing to growth and job creation and helping to address the social and environmental challenges.[1] Innovation is important for growth at all stages of development, specifically by inventing and diffusing new technologies. Obviously, different types of innovations play different roles at the various developmental stages. The notion of what an innovation is and what role the organization's policies contribute to encourage innovation has changed considerably over the past decades. Innovation may be characterized by several dimensions including:

i. The degree of novelty

ii. The type of innovation (product and process innovation)

iii. The impacts of radical and incremental innovation and

iv. The source of innovation (technological and non-technological)

The 19th century economist, Joseph Schumpeter (1883-1950), described development as a historical process of structural changes, substantially driven by innovation. He conceived five types of innovations:

1. Launch of a new product or a new species of an already known product;
2. Application of new methods of production or sales of a product (not yet proven in the industry);
3. Opening of a new market (into which a branch of the industry has not yet made inroads);
4. Acquisition of new sources of supply of raw materials or semi-finished goods;
5. New industry structure such as the creation or destruction of a monopoly position.

Schumpeter argued that anyone seeking profits must innovate; he believed that innovation is an essential driver of competitiveness and economic dynamics. He also believed that innovation is the center of economic change causing gales of creative (!) destruction. According to him innovation is a "process of industrial mutation, which incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one."

Where Will the Technology Innovators Disrupt?

Innovation in life insurance may come from two sources: firstly, the insurer himself, as an innovator who is constantly on the lookout for and employing better processes, and, secondly from the committed technology players who are dedicated solely to the insurance sector. The potential areas that insurtech innovation could play an effective role include: (i) identification of new markets and customizing of life insurance solutions with the right risk model and appropriate pricing, (ii) offering product features at reasonable prices for their innovations that are related to insurance products per se and having relevance to insurance policy underwriting and management services.

According to Professor Clayton Christensen, disruption is a process whereby a smaller company with fewer resources is able to successfully challenge the well-established incumbent businesses. Disruptive innovations originate in low-end or new-market footholds. Disruptive innovations do not catch on with the mainstream customers until quality catches up to their standards. Because disruption can take time, incumbents frequently overlook disruptors. It is possible that an app-only life insurance company may disrupt a well-entrenched insurer within a certain span of time, just as it is already happening to well-established traditional banks.

Technology innovators would be keen on playing their (disruptive) roles where the insurers still maintain traditional systems and procedures. For example, it is not hard to keep track of a customer's life cycle journey in this age of intrusive social communication media. This will not only help in innovating new outreach models for canvassing new proposals but also in tracking the portfolio of their policies. Technological innovations would nudge the insurers to make payments to their customers on schedule and also prompt their clients to revive the policies, in the case of lapsed contracts, by reaching out to them time and again. This may lift the persistency to a level that was hitherto intractable. This kind of engagement can also be traction for other kinds of services' and claims' management.

Advances in open data, satellite imagery and insights into human settlements are paving the way to scientifically model the risks to life and property arising out of natural disasters such as earthquakes, fire, floods and hurricanes. Technology is currently at the heart of modeling of risks. The new-age modelers such as RMS and Equecat are using long-term climate data of a particular geographical area/region and are studying the potential impact of natural disasters by superimposing the findings on a particular zip code.

Technological innovators not only aim to invent sophisticated back-end processes but also to offer interactive and value-added services to make the processes easier by avoiding duplication and redundancy issues.

i. Life insurers could expect disruption at major touch points across the value chain.

ii. With regard to product distribution, online aggregators assist their customers with comparisons of insurance coverage and provide proper information for self- decision making which may displace traditional distribution channels.

iii. Aggregators may overtake the role as gatekeepers to insurance and as such there will be greater competition between the firms regarding pricing, leveraging of technology for leaner policy issuance systems, and a focus on customer service, experience and interface.

iv. The new sales-funnel would be like lead generation through social media, with ease of on-boarding through applications, rather than depending on the existing sales channels,

Life Insurance: What's the Dominant Design?

The epitome of all the technological evolutions is but a search for the dominant design – a standard – relevant to the needs of the time. The dominant design should serve as a 'lighthouse for all the ships at sea', a guiding star, a goalpost, and a source from which enabling variants would emanate. In many product categories, technological evolution results in the emergence of a single product design that achieves market dominance. The emergence of a dominant design in a product category is an important event that significantly affects firms' strategies and performance.[2] Today, in the case of life insurance requirement, the clear winner is a simpler product, at affordable price, with ease of operation and servicing. We can therefore say the era of dominant design has been ushered in, but, it would not be the final product, because technology is constantly evolving; because change is constant.

A dominant design is an accepted standard that defines what a product is and what its core features are. It is a platform from which emanates a wide range of variants that are distinguishable from one another without being fundamentally different. The core features of the product effectively sets the parameters of performance that all variants built off the same platform should possess. 'Windows', the computer operating system, championed and launched by Microsoft, is a good example of a dominant design.[3]

Over the next decade the rising aspirations of customers would be fueled by technology. Currently, India's mobile phone subscriber base has crested the 1 billion mark, as per the data released recently by the country's telecom regulator. A big majority of these users will migrate to smart phones with the rapidity of the price decline and the availability of cheap data. In order to cater to the new generation of technology-savy population, an entirely different approach will have to be put in place and the ability of cutting through the noise so as to deploy the best technology option.

The 'new age' of insurance would require that the life insurer: (a) is digitally advanced, (b) has a pool of resources in terms of personnel and infrastructure, (c) is committed to experimentation, innovation, and (d) has the daring to take up the challenges posed by the technology applications in the insurance arena. The life insurer who has developed the following capacities would consequently thrive in the bargain.

- He should have the built-in efficiency and innate capability to forecast accurately and meet the customers' expectations satisfactorily, especially in solving the authentication problem through the use of technology and reducing the hassles of multiple checks and verifications at different nodes of the value chain. This will translate the transactional activity into a profitable experience.

- He should have the ability to superimpose the customer's financial data, including his credit history and other personal data to identify the exact life insurance cover suitable to his needs after evaluating the different aspects of risks thereby narrowing the gap of protection required.
- He should have the ability to generate insights from various forms of data that are helpful in removing the information asymmetry, eliminate the moral hazards and price the appropriate insurance cover competitively.
- He has to ensure that he employs appropriate technology in order to fully comply with the regulatory requirements and issues.

It is essential that technological innovations adopted need to be thoroughly tested before applying them to the core of life insurance processes. It is imperative to maintain a dynamic risk management and mitigation program to avert losses on various fronts. For seamless transmission of life insurance services through the digital platform, business continuity aspects do matter. In the current framework it is necessary to analyze the different scenarios in order to foster the various aspects of business continuity.

Harnessing the Value of Technology Innovation

Technology-related innovation can greatly impact a business enterprise in all spheres. In order to derive the maximum value out of the innovations introduced into the business, a different set of strategies are required. Now that most of the life insurers in India have had an average market experience of a decade or more, it would be beneficial for them to understand what kind of product variants and processes would work in their favor in the market. They will also need to monitor the technology innovation cycle and assess its maturity period (obsoletness) before hiring/purchasing/introducing an innovation. In highly regulated industries, like insurance, disruptions do not occur on a recurrent basis and hence they will require forecasting ability for timing the markets with the right propositions at the right time.

On the supply side, the insurers will have to understand the limits of technology and also learn how the customers and the markets are evolving. Regulations do not allow radical changes to affect them inside-out. Technology maturity level of customers and their acceptance level also matter for the right product-fit. The consumer tastes and preferences are basic cues to derive the establishment of technology maturity on the demand side and the appearance of complementary goods.

As a response to the global macro-economic environment and the falling interest rates there is a moving away from defined benefits and guaranteed products. World over, insurers are becoming cautious, and, there is shift towards defined contribution in group insurance and non-par products in the life category. Since life insurance is a capital-intensive business, insurers need to be prudent and wise and compute the cost effectiveness of every aspect of the business.

Innovation Driven or Driving?

The Insurtech space is being populated by scores of start-ups spread across an articulate and complex environment, while investment deals of more than US$ 2 billion were attributed to insurtech in 2016. The insurance industry is clearly going through a period of major adjustments, and, the insurtech world is quickly becoming a potent alternative to the traditional business models and to conventional applications. The interest in the insurtech industry has increased manifold over the last few years, attracted media coverage eight times higher than before and reached an investment level three times bigger in the year 2014.[4]

Up till now most of the technological innovations in the financial sector have been complementary and sustainable for the life insurance sector. Although the various life insurance businesses had adequate breathing time for absorbing and internalizing the processes, this shall not be the same in the future as dedicated life insurance innovators are constantly inventing newer technological innovations. The sustaining character of innovation on the established trajectories of technology is no longer guaranteed to be one of the permanent features.

In the near term, the pace of innovation has accelerated and is enormous in scale and quantity. The smart-contract technology and block-chain are being discussed at every high level conference on insurance and financial sector summits, symposiums and discussed in journals as well. It will be left to the individual's acumen to spot disruptive threats and possible opportunities in the current tide of surprises. The life insurers are in a better position to analyze the impact of (i) innovation in the insurance sector against the backdrop of the banking/payment industry's experience, (ii) the biometric technology is changing the authentication process and (iii) the effect of social tools in mapping the customers. Life insurers should therefore diligently draw up a roadmap for ensuring continuity, keeping in view the following aspects:

i. Withstand the innovation onslaught by setting up an in-house innovations lab with a view to trouncing disruption caused from outside the sector and provide adequate and timely solution-driven approach to counter the problems in the organization.

ii. Provide surveillance on the over-all financial sector; quickly identify the evolving technologies and test them in a regulatory sandbox.

iii. Win the trust which can be a big factor to retain loyalty of customers. Insurers can choose to engage their customers by providing nuggets of non-market activity and create transparency by employing innovative communication channels.

iv. Insurers will also need to devise controls and systems for analytics to be appropriately integrated into the various product offerings.

Leading Change Step by Step

Life insurers in India are facing some peculiar problems which could be solved through innovation and ensure continuity. The pressing issues before the life insurance sector are under-penetration, lower density, attrition of agents, low level of engagement leading to lower persistency etc. In order to overcome these lacuna, digital transmission of life insurance could be a solution. Considerable complementary assets formation techniques have been evolved in the financial domain, which could be utilized to overcome the problem. With the mobile technology leapfrogging and reaching the nooks and corners of the country, the customer profile has truly been transformed.

It is the time for insurers to play the right card with innovation and deploy the same like a pro. Although the clearances would come from the regulatory sandbox, there are many ways in which the decision-making capacity could be the game changer. There could also be manifold ways in which innovations across the financial and insurance verticals could be brought together and effected rightly by joining the dots.

A report by the Standard & Poor's (S&P)[5] financial services reads: We do not expect traditional insurance business to be fully replaced by insurtech companies, as the insurance sector is highly regulated and capital-intensive, with barriers to entry. Instead, we are seeing larger established insurers actively invest in setting up insurtech joint ventures through which they can take advantage of their proprietary data, rather than outsourcing to pure technology-based entrants.

An ideal life insurer of the next decade will employ and manage the phenomena of convergence of various forms of technologies that are supported by sound regulatory principles. This will include new methods of reaching out and establishing the preferred modes of communication with the markets. The vast masses of the country are awaiting a radically simpler insurance product in terms of understanding, acceptability, pricing and affordability.

Strategic Collaborations: The Key

Life insurers who wish to surf on the tide of technological innovation need to understand that the float and board of this task are collaborations and partnerships. The zeitgeist of innovation is marked by several entities coming together as opposed to a singular entity winning. In spearheading the task as a life insurer, in an emerging and vibrant economy like India, and, to reach out to a billion people for life insurance cover, in a limited time frame, there isn't any fastest, securest, direct and less capital-intensive way than via technology. To reach out to these people for enrollment without the backbone of complementary public facilities could almost be impossible. Technologies such as the mobile, the UID-biometry linked to a bank account and availability of data regarding the household income and consumption pattern would be the key enablers for life insurance to make deeper inroads.

Life insurers can also think leveraging innovation that has already emerged on the authentication, payment and banking horizon. The digital identity of citizens has been a key-innovation driver. The government's initiative and resolve to create a central identification database now holds the information of over 1 billion Indian citizens. This is being leveraged for e-KYC and financial benefit transfer schemes. It also helps firms to reduce the time and effort required for first-time customer verification.

Insurers will have to look beyond their realm to harness innovation from the larger financial sector for the benefit of customers. Marrying different forms of innovations would be an opportunity for life insurers. There is even more to the current financial system that leads to online inter-operable transactions using the digital authentication. Similarly, a unified interface that powers multiple bank accounts into a single mobile application, merging several banking features into one is on the anvil. With the above context in mind, the life insurer's job would be to collaborate strategically and bring new providers on to its platform thereby creating more value for the participants.

Absorbing Innovation Impact: A Priority

The life insurers will have to deal with the innovation onslaught tactically by adopting a proper framework for managing the product and process innovations. They must create an environment that is able to provide integrated and personalized experience in serving the markets. While ramping up their technological assets they must envisage the future properly and make enough provisions that offer tractability in their systems. While doing so, they must adhere to the leaner systems and sophisticated processes that provide easy and systematic solutions, leverage on partnerships and develop a culture of learning and accept failure, if any, with an open mind.

Life insurers will have to ensure that a high performance work system is in place. It should consist of a set of management practices that attempt to create an environment within an organization wherein every employee has greater involvement, responsibility, and accountability. Designing such a system involves combining all the HR processes together. It is all about determining what jobs a company should undertake, designing and allotting the jobs, identifying and attracting the type of employees suitable to execute the allotted task, then evaluating the employees' performance and finally compensating them appropriately so that they continue to stay with the company and are considered as assets.

A high-performance work system unites the social and technical systems (people and technology) and aligns them to the company's strategy. It ensures that all the interrelated parts of HR are interlocked with one another and with the company's targets.[6] Technology and company's organizational structure should support the employees in their efforts to apply their knowledge and skills to execute the assigned tasks efficiently and attain the company's long-term and short-term growth strategies and ensure profitability.

Conclusion

The force of technology has always been the driver of market transition from one structure to another, and will continue to remain so in the future. Life insurance is not only a form of financial intermediation but also a social bonding having a lasting impact. Upon the strong foundation of insurance rests the economic and social developments as well. The stakeholders in this ecosystem must therefore come together for strategic technology partnerships, scientific solutions and reciprocity of learning to enhance the value of the enterprise for the mutual benefit of both the insurer and the insured. The jerks and jolts of technological innovations need to be absorbed properly and patiently through regulatory safety net, testing mechanism and technological vigilance, and it must also be incubated and experimented wisely to bring out the elixir for achieving the common good for all the citizens.

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