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Insurance and Insurance Risks in Health Economics

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Abstract

Health Economics is a significant field of economy. Development of a nation is crucially connected with the condition of health of its people, and health is now been accepted as an important determinant of economic development of a nation. Here, we will discuss about many topics of Health Economics.

Keywords: Health Economics; Insurance; Risk; Machine Learning.

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1. Introduction

Economics is the science of scarcity. The application of health economics reflects a universal desire to obtain maximum value for money by ensuring not just the clinical effectiveness, but also the cost-effectiveness of healthcare provision. Achieving 'value for money' implies either a desire to achieve a predetermined objective at least cost or a desire to maximize the benefit to the population of patients served from a limited amount of resources. This requires services to be evaluated for 'cost effectiveness'.

2. Health Economics

Health economics is a branch of economics concerned with issues related to efficiency, effectiveness, value and behavior in the production and consumption of health and healthcare. In broad terms, health economists study the functioning of healthcare systems and health-affecting behaviors such as smoking.

2.1 Efficiency

An associated concept is that of efficiency, which measures how well resources are used in order to achieve a desired outcome. Opportunity cost represents an invaluable mode of thought in health economics, as it makes clear the explicit trade-offs that underlie resource use in the health services. The true cost of using scarce healthcare resources in one manner is their unavailability to fund alternative beneficial services.

All economic evaluations have a common structure which involves explicit measurement of inputs ('costs') and outcomes ('benefits').

Health economics can help to inform and improve decision making through the systematic and objective application of 'applied common sense'.

Such 'applied common sense', which symmetrically balances costs and benefits, represents a valuable mode of thinking for decision-makers, irrespective of whether a formal economic evaluation is undertaken. Health Economics is an applied field of study that allows for the systematic and rigorous examination of the problems faced in promoting health for all. By applying economic theories of consumer, producer and social choice, health economics aims to understand the behavior of individuals, health care providers, public and private organizations, and governments in decision-making.

2.2 Concerns

Health economics is used to promote healthy lifestyles and positive health outcomes through the study of health care providers, hospitals and clinics, managed care and public health promotion activities. The MHS in Global Health Economics degree program in the Department of International Health at the Johns Hopkins

Bloomberg School of Public Health uses health economic principals to address global issues such as migration, displaced persons, climate change, vaccine access, injuries, obesity and pandemics.

Healthcare markets

The five health markets typically analyzed are:

a) Healthcare financing market
b) Physician and nurses services market
c) Institutional services market
d) Input factors markets
e) Professional education market

3. Insurance

Insurance is a means of protection from financial loss. It is a form of risk management, primarily used to hedge against the risk of a contingent or uncertain loss

An entity which provides insurance is known as an insurer, insurance company, insurance carrier or underwriter. A person or entity who buys insurance is known as an insured or as a policyholder. The insurance transaction involves the insured assuming a guaranteed and known relatively small loss in the form of payment to the insurer in exchange for the insurer's promise to compensate the insured in the event of a covered loss. The loss may or may not be financial, but it must be reducible to financial terms, and usually involves something in which the insured has an insurable interest established by ownership, possession, or pre-existing relationship.

4. Insurance and Risk

4.1. Meaning of Risk

In simple words risk is danger, peril, hazard, chance of loss, amount covered by insurance, person or object insured. The risk is an event or happening which is not planned but eventually happens with financial consequences resulting in loss. There is saying higher the risk more the profit.

A risky proposal can on one hand bring higher profits but on the other hand looming losses. The risk can never be certain or predictable. Therefore there is need for the risk management.

The risk management is nothing but a method to prejudge the risk that may come up sometime in future. It is not prediction but a process of reducing the risk to a minimum level. Risk management involves a number of measures that are used to keep the risk at possible minimum level.

In our day to day life also we take many steps to keep the risk at lower level for example most people do not keep valuables at home and rather prefer to keep them in a bank locker by paying certain locker rent to the bank.

Similarly risk of life, health or property is reduced by purchasing a proper insurance. All these actions of individual persons are done under fear of uncertainty and unpredictability of future. Likewise in business and commerce also an element of fear of loss always exists if the risk components are not managed properly.

Risk is a fear of happening something adverse and in order to restrict such adverse happenings a plan is envisaged to overcome such adverse happenings. Which is called as risk management. In the field of Insurance such fears, uncertainties, prejudgments of forthcoming risks and the size of risk and its potentiality is determined by the Actuary appointed by the IRDA.

The first step towards arrested the risk or fear of risk is to identify the risk. But how to identify it unless it is known what type of risk should looked into. Hence it important to know the nature of the risk.

5. Types of Risk

The risk can be of many types but it revolves around two main factors

(i) Pure Risk

Such risks are accidental in nature. Being accidental can bring potentially in losses. Any accident brings in physical loss and therefore a pure loss is a physical loss that the insured faces due to occurrence of an event that has been insured against. Physical loss may be of any type be it a loss in business, due to fire hazards and losing stocked goods, due damage to a property for any reason.

An accident of any type culminating into financial loss or loss of life are some examples of pure risks. All types of physical risks are hard to be avoided. They may occur due to human negligence or by natural calamities, Riots, strikes, sudden breakdown in a manufacturing unit. Fall in prices of goods stored, and so many other reasons that contribute to cause losses As per Prof. M Haller “The possibility that positive expectations of a Goal Oriented System will not be fulfilled”.

This definition of Prof. Haller is although not confined to the definition of pure risk but is applicable to the whole term of “RISK”. It is important to note that the pure risks or risk of trade are such that they can seldom be avoided buy t can be insured against.

(ii) Speculative Risks

Such types are always speculative may it be profit or loss in both cases speculations works. Mostly speculation is done in the field of trade. There may un accounted reasons for creation of risks in the field of trade may be price rise, inflation, rotting of stock of goods or stagnations of stocks due to strike, terrorists threat, declaration of war or the stock going out of use or fashion.

By the meaning of the word speculation one can understand that speculation is type of purchase or sale of shares on an estimate of whether the share value rise or fall, with intention of making profit, or avoiding a loss It is like gamble on future price movements, whether in share, land, commodity or money. Gambling itself is a speculative risk which cannot be relied upon. A gambler can never be certain of win position and can never be trusted in the business of gambling.

The difference between the two risks is that the pure risks can be insured but the speculative risks cannot be insured.

Only if for the purpose of going deep into identifying the factor of risk it can be classified in the way depending on the way of how an individual or accompany feels fears for the happenings in future. As such the classification can be divided into as many reasons and as many companies that exist on the earth as on date.

There should be a specific limit of identifying a risk like pure risk and speculative risk. If one presumes risk can be a certain risk, uncertain risk, a visual risk and UN -visual risk, a temporary risk and a permanent risk etc. but there is no end of identifying an actual risk.

It is therefore necessary that the track record of previous happenings in every field of life is taken into account to estimate the future risks in a particular field may it be a risk of life, health, industry, trading, business, commerce, vehicles, home and so on.

6. Transfer of Risks

Before we understand what is transfer of risk we must know what is meaning of the word transfer. The meaning of transfer is to move from one place to another, to covey property to another, or transfer any right/power/money/shares/liabilities or assets.

When we talk of liabilities one becomes much alert as everyone is eager to transfer the liabilities to someone else the particularly pecuniary liabilities. And what are those pecuniary liabilities. It may a debt due to a bank/others, liability of procuring health services, liability of accidental events or otherwise. Every type of liability is considered as a Risk.

The Insurance is a form of risk management. It is primarily used to transfer risks of loss in exchange for payment of certain amount known as premium. The insurer company is engaged in the business of selling the insurance, (willing to accept the risk) the person desirous of purchasing the insurance (willing to transfer the risks).

In simple words when one feels unsecured and wishes to get secured by payment of certain amount is known as transfer of risk. A person fearing attack on his life employees Body Guards and pays them the monthly salary is an attempt to secure himself for loss of his life. Likewise any uncertainty of economic loss is if secured by paying certain sum of amount to an insurance company is transferring of risk.

However the insurance rate is a factor used to determine the amount to be charged for a certain amount of insurance coverage. The insurance involves a pre known amount to be born by the insured in the form of fixed premium as per the terms and conditions of insurance agreement (say Insurance Policy). In exchange an insurance company promises to compensate the insured in case of loss. Such losses are compensated as per the terms of the insurance policy purchased.

6.1 Why the Risk is transferred

The risk that an individual or an entity is not willing to bear is preferred to be transferred to another entity. In brief it is called insurance. In exchange for payment of an agreed amount say premium the insurer agrees to indemnify the insured for losses that result from specified perils. Options and hedges also operate to transfer risk from one party to another.

In some instances the counter parties may be entities specially established to engage in the hedging or opinion trading, but in many instances they will be entities whose risk arises from the opposite movement in a price or volume of supply. In case of infrastructure projects there are many mechanisms existing for transfer of risk arising from the perceived uncertainties.

7. Insurance Technologies

Artificial Intelligence (AI)

Consumers are always looking for personalized experiences, especially when purchasing something as important as P&C insurance. AI offers insurers the ability to create these unique experiences, meeting the high-speed demands of modern consumers.

With AI, insurers can improve claims turnaround cycles and fundamentally change the underwriting process. AI also enables insurers to access data faster, and cutting out the human element can lead to more accurate reporting in shorter periods of time.

A report from PwC forecasted that AI's initial impact will primarily relate to improving efficiencies and automating existing customer-facing underwriting and claims processes. Over time, its impact will be more profound; it can identify, assess, and underwrite emerging risks and identify new revenue sources.

7.1 Machine Learning

Insurance technology trends in 2019 will include the overlapping of various technologies, all in the name of improving accuracy. According to Forbes, "Machine learning is technically a branch of AI, but it's more specific. Machine learning is based on the idea that we can build machines to process data and learn on their own, without our constant supervision."

Machine learning can not only improve claims processing, it can automate it. When files are digital and accessible via the cloud, they can be analyzed using pre-programmed algorithms, improving processing speed and accuracy. This automated review can impact more than just claims – it can be used for policy administration and risk assessment.

Most consumers are willing to share extra personal information if it means saving money on their insurance policies – and the Internet of Things (IoT) can automate much of that data sharing. Insurers can use data from IoT devices such as the various components of smart homes and wearable technologies to better determine rates, mitigate risk, and even prevent losses in the first place.

7.2 Social Media Data

Social media and its role in the insurance industry is evolving beyond marketing strategies and clever advertisements. Mining social media data is improving risk assessment for P&C insurers, bolstering fraud detection capabilities, and enabling entirely new customer experiences.

Insurance technology can also leverage social media to investigate fraud. Insurers can look at the social activity of insureds and compare it to claims records, looking for any discrepancies. A Morgan Stanley report cited a tool utilized by carriers to investigate claims throughout the assessment process that examines the social relationships between parties involved – and monitors their activity on the day of the loss to look for red flags.

7.3 Telematics

Auto policies will continue to be impacted by telematics capabilities. In insurance technology, think of telematics as wearable technology for your car. Cars equipped with monitoring devices — think Progressive's

Snapshot — measure various indicators such as data on speed, location, accidents, and more, which is all monitored and processed with analytics software to determine your policy premium.

7.4 Chatbots

Utilizing AI and machine learning, chatbots can interact with customers seamlessly, saving everyone within an organization time – and ultimately saving insurance companies money. A bot can walk a customer through a policy application or claims process, reserving human intervention for more complex cases.

7.5 Drones

Insurers are taking to the sky, or at least their drones are. Unmanned drones are an insurance technology tool that will be utilized more by carriers in 2019. They can be used across many stages of the insurance lifeycle – collecting data to calculate risk before issuing a policy, aiding in preventative maintenance, and assessing damage following a loss.

Farmers insurance is a great example, as they deploy Kespry drones to aid risk and damage assessment on homes. These drones perform roof inspections and other assessments, and the drones transmit their data to the cloud for analysis. This is yet another instance of IoT and other technologies working together in the insurance industry.

8. SID

In economics, supplier induced demand (SID) may occur when asymmetry of information exists between supplier and consumer. The supplier can use superior information to encourage an individual to demand a greater quantity of the good or service they supply than the Pareto efficient level, should asymmetric information not exist. The result of this is a welfare loss.

The concept of supplier-induced demand (SID) in medical markets has been the subject of considerable debate for many years. The primary objective of this paper is to contribute to a better understanding of the competing viewpoints on SID for medical services — through a balanced assessment of the existing theory and evidence, using an economic framework focusing on Australian general practitioners. Its origins can be found in the Commission's research paper Private Hospitals in Australia (PC 1999), which argued that more research on this topic was warranted.

9. Conclusion

P&C carriers are always searching for the latest and greatest developments in insurance technology. It helps them not only stay ahead of their competitors, but also deliver the experiences customers expect in the modern

market. With all of the innovation going to market in recent years, from smart home technology to insurrects and micro services, 2019 will be a very interesting year to watch for insurance technology developments.

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