

Abstract

This research was aimed to study the impact on the individuals that do not engage in having insurance policy to any of insurance companies in Thailand. Whether that these individuals are being subjected to increases in cost in having insurance in the future if they were to not have insurance today due to recognition lag.

Our approach to identify the impacts are theoretical framework approach with support from theory from various field such as economics, behavioral economics, and psychology. By identifying and addressing the increasing cost and impacts that can be a burden in the future to the non-policyholders, these group of individuals may change their perception toward insurance and will participate in having an insurance policy.

We found that there is sunk cost effect can be one of the causes that change perception toward insurance and induce individual to participate in having insurance policy. However, sunk cost effect will be significant if and only if amount of sunk cost has met the sunk cost threshold.

Finally, with identification of impact from sunk cost effect, this can induce individuals to buy insurance policy. This will increase the insurance penetration rate for Thailand. As the result more uninsured individuals will engage in becoming policyholder, which they will reap the benefit and reduce the loss by having insurance. And for the insurance companies will also benefit from having larger pool of policyholder which will be better off for them because of risk diversification.

Introduction

Insurance is one major factor enhancing the quality of life and ensures the growth and development of businesses in the country. It can be commonly seen that the insurance sector is an important industry which help in wealth creation and preservation. New innovations and product development of insurances are being enhanced and developed to have more complexity in order to meet more variety of demand from customers. To elaborate on the role of insurance, it is used as a guarantee of a party to another party. With such functions, it helps facilitate businesses activities and provide protection to individual. Insurance sector is considered as an important growth driver in the society.

However, there are some complications in the industry as well. Such is the negative perception towards the insurance industry from the general public. Which led to the low awareness in the importance of insurance for the society and economies as a whole (Hoppe, 2012). This arise the common perception for the individuals that insurance's benefit is not worth the money you pay. This has caused many people to be underinsured or uninsured. But there can also be the case that people will start value insurance again when loss already incurred (Hoppe 2012). This can be seen as the recognition lag that individual will need to face adverse scenario first and incurred losses either in monetary or emotional aspect before recognize the use of insurance for protection against adverse events.

Individuals may face increases in cost due to recognition lag from the incurred cost and rise in premium due to increase in riskiness. For example in Thailand after the 2011 flood, insurer recognizing the increase in risk of its policy thus increase premium in some area for 50-200% (Cookson & Davies, 2011). By identification of these effect to uninsured individuals beforehand may able to prevent problem of recognition lag to occur. So, this

paper will be focus on identifying and addressing the total effects arise from the society's recognition lag of importance in insurance policy.

Experimental Design

This paper will employ the approach of theoretical analysis with use of literatures from various fields such as economics, behavioral economics and psychology area to analyze and find the result.

Related Literature Review

There was a study by Hoppe (2012) suggest the low awareness of the positive side to insurance industry, one of the cause is from Recognition Lag toward the benefit from having insurance policies. And also mention the loss that incurred but was not in coverage because the individual do not possess insurance policy.

In the next research article published by Insurer of Europe CEA (2006), in this study it give the example case of non-insured parties in Canada. It examined the effects of non-insurance and under-insured parties on commercial operations. The report tells that these SMEs could have protected their operations, reduce risks, and loss that occur to them with just appropriate insurance. An appropriate Insurance expense might take only less than 1% of their total expenses. So, if these SMEs have an appropriate insurance policy, it could have protected many jobs and prevent economic crisis or disaster.

Another research article by Henri Claude de B. (2006) focus on the major factors that have cause bad perception upon consumers: such as force selling, lying, and adverse recommendation. Which result in the consumers will be defensive in listening by the insurance agents. This can be consider as transaction cost for individuals to purchase

insurance. Thus cause the delay in purchasing the insurance policy due to lack of essential information about the policy.

Section 1 Theoretical Framework

For the person to consider buying health insurance, that person need to take into account of expected cost and expected benefit comparison in buying health insurance.

Expected Cost are the costs that anticipated by the individual when they are considering to buy health insurance. Costs are not only monetary costs, but involve in opportunity cost, transaction cost, emotion cost and other unobservable factors as well.

$$\text{Expected Cost} = C$$

$$C = \text{Monetary cost (Premium)} + \text{Transaction cost}^1 + \text{Unobservable factors}$$

$$C = M\beta_1 + TC\beta_2 + \varepsilon$$

Expected Benefit are the benefit that anticipated by the individual when they are considering to buy health insurance. Benefit is not also limited to only monetary benefit but also emotion benefit and other unobservable factors.

$$\text{Expected Benefit} = B$$

$$B = \text{Indemnity benefit} + \text{Emotion benefit}^2 + \text{Unobservable factors}$$

$$B = IB\beta_1 + EB\beta_2 + \varepsilon$$

¹ As stated in related literature review, bad perception of consumers toward insurances providers created lemon market problem where it will increases transaction cost for consumers to identify good providers from bad providers.

² It is an article conducted by Mckinsey where they conduct health care services survey in May 2007, and Jan 2009 (http://www.mckinsey.com/insights/health_systems_and_services/the_role_of_emotions_in_buying_health_insurance)

It is quite straight forward for indemnity benefit. But for the emotion benefit, it is somehow unconventional when taking it into consideration of benefit receiving from insurance. A report from McKinsey stated that “Consumers do value the peace of mind provided by health insurance over more practical concerns such as coverage or networks.” This do in fact imply that consumer do take into account of emotion benefits.

There are three possible outcomes:

1. Expected Cost > Expected Benefit

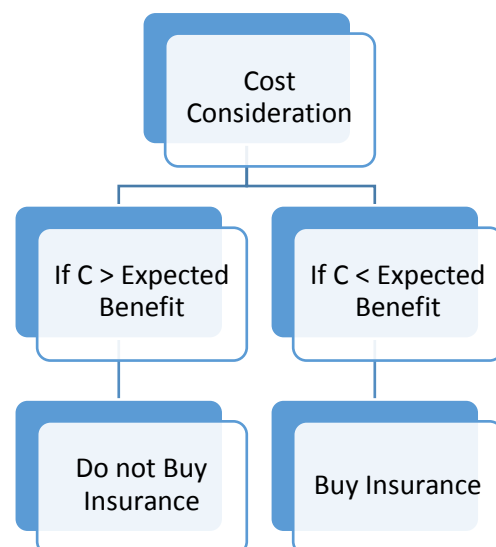
This mean individuals will not consider to buy health insurance.

2. Expected Cost = Expected Benefit

This mean individuals will be indifferent in buying health insurance.

3. Expected Cost < Expected Benefit

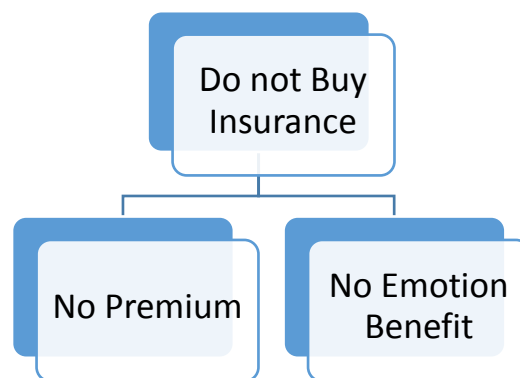
This mean individuals will consider to buy health insurance.



We will consider the cases that individual will either buy insurance or not buy insurance. We will not consider the case of indifference of individual in this paper for simplicity.

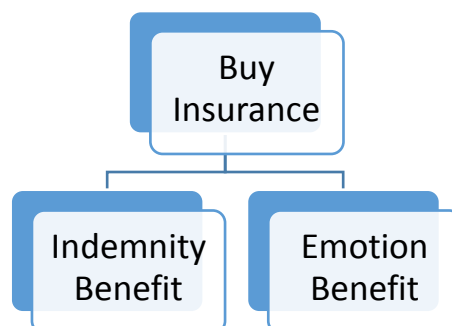
Section 1.1 Case A: Not Buying Insurance

This case will happen when individual has expected cost in having an insurance to be higher than expected benefit from having an insurance. Thus the consumer will not receive



Section 1.2 Case B: Buying insurance

When the expected benefit that they will receive from insurance exceed the expected cost when buying an insurance, that individual will buy the insurance.



With the above conditions, all individuals should rather be settled in either one of the case. Thus, individuals who will always buy insurance will always buy insurances. And individuals who will always don't buy insurance will always don't buy insurances. However, as the literature review, Hoppe (2012), above which suggested that individuals will start to value insurance when loss occurred and benefit are expected to receive. This mean there can be change in behavior when some condition is met. Thus, non-policyholder can turn to buy insurances. Hence, the expected value of benefit and cost can be change depending on expectation of individuals. In the next section we will discuss about how recognition lag can affect the expectation of individuals

Section 2: Recognition Lag

Previous section has introduced the possibility of behavior changes of individuals via unexpected incident. This section will discuss more in detail of the scenario and explain the process of behavioral changes.

In general, it is well known that risk averse individuals will purchases more insurances to protect themselves from unforeseen events when compare to risk-lovers ones. But in fact risk-lover are many and prone to buy insurance under some circumstances.³ It is then can be assume that all type of people either risk-averse or risk-lovers will eventually buy health insurances when they're faced with certain circumstances. Such circumstances can be some events that occur to them which are unexpected. Thus, these events can create a cognitive dissonance status to that individual. Festinger (1957) explained that cognitive dissonance is the type of mental stress or mental discomfort to individual when they are confronted by new information that contradict with existing beliefs, ideas, or values.

³ Risk-lover has more price-sensitivity toward fix-cost of insurance policy and preferring a plan with lower fix-cost. (Anne Corcos, 2013)

Therefore with the actual event does not match with individual belief then this individual will have cognitive dissonance.

In the case of health insurance as example of cognitive dissonance. Let say an individual that decided not to buy insurance will probably has belief that they will not get sick therefore by not buying health insurance will be better off for them. In other words, they think that the probability that they will get sick is so small that they will not receive any benefit in having a health insurance thus their expected cost from insurance are higher than the expected benefit they will get from insurance. Their belief is simple, “they will not get sick and so they are better off not having insurance”. Thus this can be viewed as pseudocertainty effect in their decision making. Tversky & Kahneman (1986) explained that pseudocertainty effect is the people perception to viewed outcome as certainty before event occur which in fact it is still uncertain. So, this individual tend to ignore the uncertainty that they can get sick. They will then only focus on the case where they are not sick and discarded option of being sick. So they will come up with the conclusion of not having an insurance.

But in the actual event, it occur that they got sick and incurred cost from not having insurance. This will triggered cognitive dissonance. With mismatching of actual event and belief, individuals will then engage in dissonance reduction⁴ or try to find way to relieve this mental stress via matching the actual event and belief. In this case, they will now change their belief to “they can get sick” in order to relieve the mental stress. Individuals will now change their perception toward risks which they are considered to be more risky. This will result in

⁴ Festinger (1957) explain that this is the process of matching the mismatched of actual event and belief. There can be 4 ways of matching. 1. Change in belief (I can get sick) 2. Justify belief by changing the conflicting belief (I can get sick once in a while, but normally I will not get sick) 3. Justify belief by adding more belief (I got sick, I just sleep well and take care of myself) 4. Ignore or deny any information that conflict with existing belief (I am not sick, it's just a normal body reaction)

increase in expected benefit toward having an insurances. This behavior can be perfectly describe by Certainty Effect⁵ which is a part in Prospect Theory⁶.

For measuring the severity of riskiness of individual, we can consider the medical cost which individuals incurred while hold no-policy to be associated cost in not having insurances. These costs that incurred can be considered as sunk cost of not having insurances.

As more and more sunk cost occurred. These individuals will turn to practice loss aversion mindset. According to Kahneman (1984) the effect from the loss aversion mindset will then cause the individual to reconsider their expectation of costs and benefits of health insurance since they now think that they can get sick and became loss averse. Finally insurance can be a solution for them.

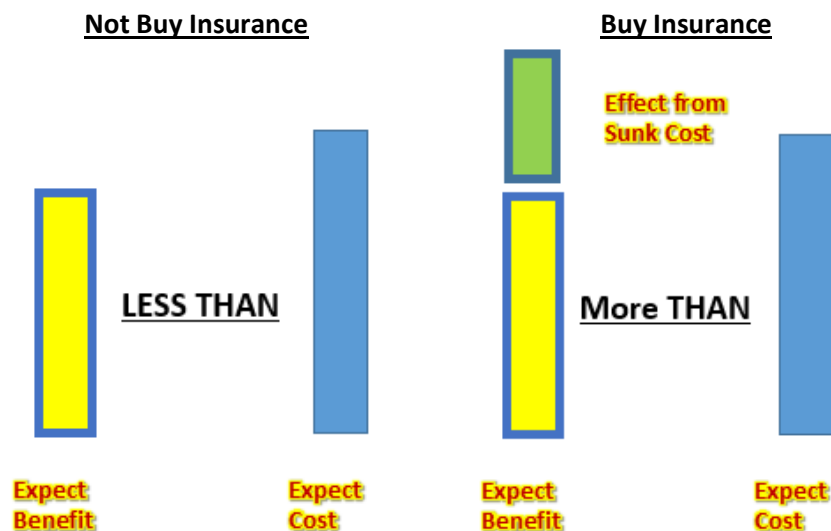
Section 3: Sunk Cost Effect

This section will discuss about how sunk costs can cause change in the behavior of individual. As mention in previous section that individuals will turn to loss aversion mindset when more loss which is sunk cost accumulates from many adverse incidents. Even though the risk perception of individual has been changed, but it may not trigger change in behavior. Due to the fact that the effect from sunk cost that give rise to expected benefit on insurance is not significantly represent the cost of not having insurance in that period. However, sunk cost effect can accumulates to the point where the expected benefit outweighs expected cost. This will then match with the condition of buying insurance where expected benefit is now more

⁵ Certainty effect gives explanation on the psychological effect resulted from the reduction of probability from certainty to uncertain. (Tversky & Kahneman, 1986)

⁶ Prospect Theory is a behavioral economic theory that speaks about behavior of individuals' choices under risks. (Kahneman & Tversky, 1979)

than expected cost. This will then trigger change in behavior and individual that at first do not buy insurance will now buy insurance.



We can examine the trigger point of sunk cost effect as the initial value of expected benefit and expected cost of individual before obtaining sunk cost effect. This can be seen as sunk cost threshold. We may able to assume that risk-lover can have the larger threshold of sunk cost effect before it become significant than the risk-averse that will have a smaller threshold. We may conclude that in order for sunk cost effect to be significant, total amount of sunk cost will be needed to reach threshold before causing any change in behavior of individuals.

Section 4: Discussion and Conclusion

While in normal condition, individuals that do not buy insurance will remain as none buyer. But with the impact from sunk cost effect as discussed in section 3, it can change behavior of none buyer to buy insurance when sunk cost threshold is met. In simple word, individual will consider to buy health insurance only when there are cost incurred to the

amount that they no longer see it is beneficial to remain unprotected by insurance. Hence, they will have increase in expected benefit from having protection from insurance and finally buy insurance.

We can conclude that the recognition lag in importance of insurance has inflicted some costs to individuals. They then will later realize the importance aspect of insurance which is risk transfer to insurer. However, since those individuals that have experienced adverse incident. They will now be consider as higher risk group where their premium in doing insurance will increase. Thus the effect from recognition lag are mainly from two things; 1.Sunk Cost 2.Increased in premium.

We can see that the impact from recognition lag can be costly to individual and society. This may cause us to underutilize insurance policy. There is the example given by CEA (2006), where in Canada 70% of uninsured or underinsured SME do not recover from either economic shocks or natural disasters. Also an example in Thailand, the recent flood in 2011 has make the insurance industry to responded to the situation by raising rates in some areas between 50 and 200 percent after the flood natural disaster (Cookson & Davies, 2011). If we able to eliminates these recognition lag, perhaps we able to prevent economic losses that can happen.

Section 5: Contribution

Elimination of these recognition lag may induce more individuals to buy insurances which in turn can increase insurance penetration rate. This will be advantageous to all parties: Insurer, policyholder, and general public. Insurer can enjoy higher risk pooling and diversification of risk from larger numbers of policyholder. They can also achieve economy of scale as well. This will also be beneficiary to policyholder as well. When insurers have better risk diversification and achieve economy of scale which imply higher profit margin,

this will then signal new entries into insurance market, where competition will increase. This can have effect on reduction in price while increase in quality from the insurer to remain competitive in the market. Policyholder will be able to enjoy better product quality and at the lower premium. General public will benefit from presence of higher insurance penetration rate. Because it can be the way that when some industry that got badly affected from adverse situation. That industry may try to request support from general public to help them. Example is the bailouts in the banking sector during 2008 financial crisis. Insurance can help mitigate or at least reduce severity of this event and thus will not cost taxpayer money to solve the problem.

Section 6: Complications

But there can be complications from the increased insurance penetration rate. First, sunk cost is the cost that has been incurred and should not be taken into account for future decision making. Thus this can be the irrationality of sunk cost fallacy of individuals caused from loss aversion mindset. This may be exploited by sales agents to cause adverse selection of insurance plan to policyholder to buy sub-optimal plan for themselves. Second, health insurance can be considered as a club good where if too many policyholders came to use the same hospital for medication, it can be oversaturated and cause further problems such as long waiting line, over-working personnel can be prone to conduct more errors and etc.

Section 7: Further Studies

There are certain areas that can be explore for further analysis. Where the differences in sunk cost threshold of risk-lovers and risk-averse people are needed to compute in numerical value in order to price insurance plan that best suit that individual. Premium of insurance can also be consider as a sunk cost in having insurance as well. Thus the reverse effect can happen that policyholder incurred so much sunk cost from premium until they decided it is no longer beneficiary in having insurance. Hence, they will quit from being insured and become uninsured again.

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