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## Role of insurance in post disaster recovery planning in business community

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### Abstract

The whole world is facing a substantial of natural disasters which brings severe damages throughout the world. Attention must be given to rehabilitate the business community that is affected by these disasters. However, improper planning for recovering damages in business community becomes a major issue when it obstructs the continuation and development of the business community. Therefore, required measures should be taken to avoid collapsing of development of the business community affected by disasters. In this context, insurance plays a vital role to reinstate the business while reducing the financial consequences of the disaster.

This study investigates the role of insurance as a provision to recover the disastrous destruction of the business community in Sri Lanka. To achieve this, the survey method was used as the approach and semi structured interviews carried out within five experts from insurance sector and eight experts from the business community. Content analysis was used to analyze the collected data from the empirical study.

The analysis of the findings based on two areas of insurers' and insured' perception of insurance. One of the major finding was that the insurance is not extended to any frequent disaster prone area of the country unless accepted by the insured with either higher premium amount or higher amount of deductible. As per the insurer's side, some issues of the current practice are identified as less awareness, dishonesty and fraudulent practice of the insured which leads to less identification of the insurance as a risk management strategy within the business community. According to the insured, main purposes of obtaining insurance are quick recovery of business and to fulfil the borrowing requirements. Recommendations were developed as increase the awareness, educating and the government participation to increase the insurance penetration to the business community.

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*Keywords:* Insurance; Recovery planning; Post disaster; Business community

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## Introduction

Since the disasters are non-routine events that require non-routine response, any business community cannot rely on normal procedures to implement appropriate responses to dealing with disasters (Atmanand, 2003). Davies and Walters (1998) stated that the worst disaster for an organization would be the main source of income generating activities of the company been severely affected. The authors further revealed that reduce revenues, customer loss, reduce market shares can be arise due to even brief business interruption and major business interruption may threaten a company's survival.

Alexander (1992) highlighted that the plans must be developed and implemented to assure that all critical business functions continue successfully in the event of disaster. Paradine (1995) explored that the Disaster Recovery Planning (DRP) as an obvious solution which ensures the successful recovery of business after suffered from major disasters. Moe, Gehbauer, Senitz, and Mueller (2007) explained that post disaster recovery planning process involves decisions and actions taken after a disaster to restoring or improving the pre-disaster living conditions while encouraging and facilitating to obtain necessary adjustments to reduce disaster risk. Disaster recovery is essential for an organization to remain viable in the face of disasters because many companies go bankrupt or close within the first year following a disaster (Hardly, Kathy, Roper, & Kennedy, 2009). Thus, Paradine argued that (1995) insurance protects organizations from the financial consequences of loss which avoids the potential business bankruptcy in future.

Paradine (1995) indicated about two ways to handle the financial risk of disaster: either can decide to bear the cost organization it self-that is, retain the risk or transfer the risk to the insurer. Same further stated that, DRP and planning for insurance protection are inextricably linked because the obvious solution for organization finance needs during an interruption of business is to transfer the risk of loss through the insurance. Srivastava D.C and Srivastava (as cited in Atmanand, 2003) reported that insurance is by definition form of disaster preparedness: it represents an important requirement for many economic activities. Simultaneously, Paradine (1995) specified that one of the major ways of financing the disaster risk is through an insurance cover by ensuring that funds are available after a disaster, to enable the business to continue. Furthermore, the author argued that insurance on its own does nothing to prevent losses; nevertheless it protects organizations from the financial consequences of loss. However, Paradine (1995) indicates insurance has a major role in determining how to well survive in the interruption of normal business. Thus, this paper intends to identify the role of insurance in post disaster recovery planning in business community. The structure of this paper contains insurance in post disaster recovery planning in business community, Research methodology and the findings of the research.

## Insurance in post disaster recovery planning in business community

It is hard to find any part of the globe which is really free from natural disaster of one kind or the other (Atmanand, 2003). Fortson (2007) mentioned that there is no part of a country that is not vulnerable to some form of disasters such as an earthquake, hurricane, flood or any other which can cause extensive damage the property. Sri Lankan also fell into this category after being affected by Indian Ocean Tsunami in 2004 and other natural disasters which frequently bring in severe damage throughout the country (Palliyaguru&Amaratunga, 2008). Eden and Matthews (1997) defined disaster as any incident which threatens and damages to human, buildings, collections, equipment and systems. Arnell (as cited in chow, 2007) stated that disaster can be identified as any event that can cause a significant disruption in information services capabilities for a period of time and affect the operation of the organization.

Suncorp Group (2007) explained that even efforts are taken to mitigate the risk of disasters, there will always be some level of risk that remains. On the other hand, most of the buildings were designed and constructed without consideration of the threat of disasters and therefore offer little protection (Carmichael & Gartell, 1994). (Asgary, Anjam, & Azimi, 2011) mentioned that although the direct damages to businesses are negligible in many cases, indirect impacts namely off-site business interruption, reduction in property values and stock market effects, sociological and environmental effects are severe enough to cause significant business closures. Carmichael and Gartell (1994) indicated that, despite all actions taken to minimize the risk of loss, incidents can occur while resulting in injury to people, damage to property and disruption to business.

Heikkinen and Sarkis (1996) stated that even though waiting for a disaster to strike is not a good plan for dealing with disasters; most of the organization has ignored the importance of taking necessary methods to recover.

Therefore authors argued disaster recovery plan must be executed to minimize the damage. Recovery stage occurs after the disaster event and it includes post disaster actions such as rebuilding of damaged structures to restore normal operation (Godschalk, Brower, & Beatley, as cited in Godschalk, Beatley, Berke, Brower, & Kaiser, 1998). Moreover, without planning for the recovery of the place which provides the environment in business units and processes operate, anyone cannot expect to recover fully and continue the business or services (Moore, 1995). The purpose of disaster recovery plan is to minimize financial losses, maintain the continuity of operation, ensure the integrity of data and restore normal operation in a timely and cost effective manner (Chow, 2000). Disaster recovery planning is a process of developing a series of strategies that enable the resumption of critical functions of an organization to an acceptable level of service in the event of any types of disaster (Chow & Ha, 2009). Author further explained effective management and control of disaster risk will provide long-term cost reduction, minimize disruption in the event of a loss and enable the business to operate more effectively. Kusumasari and Alam (2012) explained decisions and actions which cover planning; coordination and funding therefore need to be taken in guiding short and long-term efforts to reduce the risk of similar disasters in the future. Therefore, a disaster recovery plan can be identified as a predetermined set of instructions that describes the process of disaster recovery (Heikkinen & Sarkis, 1996).

Insurance is an important aspect to manage the residual risk which cannot be eliminated further (Suncorp Group, 2007). Insurance is useful to businesses as it aids the planning process of businesses as security provided by insurance, business operators can invest more into the business, creating more revenue for the economy through construction and expansion of needs (Chua, 2000). When a major loss occurs, the insurer will immediately appoint its own representative known as a loss adjuster who works only for the insurance company and report to them concerning potential settlement.

Brown and Churchill (2000) explained that due to the following characteristics disaster insurance is distinct from other forms of insurance: Disaster risks are difficult to estimate, They can affect large portions of the population or the risk pool at the same time, Informal safety nets (family and friends) tend to break down and They cause multiple losses simultaneously to life, health and property.

Linnerooth-Bayer, Mace, and Verheyen (2003) explained that most businesses re-opened using their own resources and other available risk financing instruments as getting loans from family, micro-credit institutions or money lenders, selling or mortgaging assets and land or rely on public and international aids. Usually small entrepreneurs start the clean-up and repairs in order to restore their businesses as soon as possible, whether in the same location or elsewhere. Most businesses did this with the help of family members and friends (Asgary, Anjam, & Azimi (2011). Accordingly, Hochrainer and Mechler (2011) noted that insurance is the best known instrument which provides an indemnification against losses after an event by exchanging a premium payment before such events. Figure 1 exhibits five insurance principal relating to disaster insurance which must fulfill some important aspects in order to make success the recovering process.

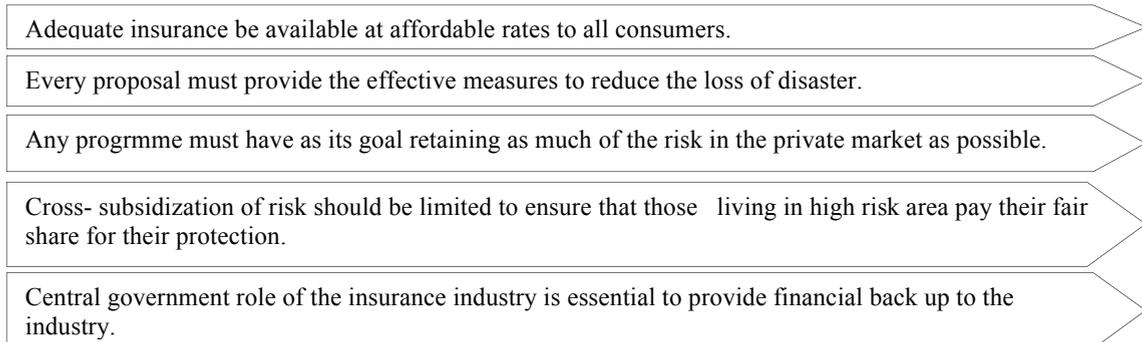


Figure 1: Disaster insurance principals  
Source: Atmanand (2003)

Transferring the risk is most suitable only where the severity of risk is high and frequency of risk happening is low. Therefore, insurance becomes most suitable risk handling technique in such situation. Gustin (2010) mentioned that even disasters occur infrequently, it can destroy a business when it occurred. Thus, attention should be given to buying a strong insurance policy along to effective emergency design and planning.

Seventeen factors are considered to success the disaster recovery planning process. It describes all the necessary conditions and situation that any organization should concern. Chow (2000) summarized all seventeen factors by referring some studies of different authors. Each factor discusses required circumstances and how to success the disaster recovery planning process effectively. Among all these seventeen factors insurance describes as an important factor which is essential to provide funds to reduce the financial impact of losses.

## **Insurance in post disaster recovery planning in Sri Lanka**

### ***Insurance industry in Sri Lanka***

According to the Insurance Board Of Sri Lanka (IBSL), 2012) insurance industry in Sri Lanka consisted of 22 Insurance Companies (3 companies are engaged in only long-term life insurance business, 6 companies in only Non-Life insurance business and the balance 12 Companies are engaged with both Life and Non-Life insurance), 54 Insurance brokers and 36,801 Insurance Agents. The insurance industry is regulated and supervised in terms of the provisions of the regulation of Insurance Industry Act No. 43 of 2000 of Sri Lanka. The IBSL was also established under this Act. IBSL further stated that there is a huge growth potential for the insurance industry in Sri Lanka. Even though the market is growing steadily, the penetration level remains low. The industry must seize this opportunity to grow the market further.

### ***Involvement of the insurance in post disaster recovery planning in Sri Lanka***

Sri Lanka has experienced a variety of natural and human induced disasters that have had a disastrous impact on human well-being as well as the economic welfare of the country. Further, Statistics on disaster impacts in Sri Lanka appear to suggest that risks due to natural hazards are increasing (Disaster Management Centre (DMC) 2005). Until recognize the challenges exposed by the recent tsunami, the risks from natural hazards to Sri Lanka were considered as low. In addition to the fishing sector, the agriculture, tourism and salt industries impacted as a consequence of the tsunami (Rodriguez, Wachtendorf, Kendra, & Trainer, as cited in Amarathunga & Haigh, 2011). According to Preliminary needs assessment report (2005), the importance of risk transfer mechanisms has been identified to mitigate the financial impact of disasters on the economy and future development activities. Further, in Sri Lanka, larger businesses in tourism and industry are insured, however, insurance penetration is inconsistent and individual housing and livelihood insurance against losses caused by natural disasters is not widespread. Most hoteliers did not have cover for the consequential impact of the disasters and have had to bear the cost in full (refer Section 1.1 in Chapter One). Therefore, Jayasuriya, Steele, and Weerakoon (2005) suggested that business would at least have an insurance for at least partially cover their reconstruction cost.

## **Research methodology**

The aim of this study was to identify the insurance in general and relationship with post disaster recovery planning, perceptions of insurer and insured and provide recommendations to enhance the insurance penetration to the society. Survey method proved to be the most appropriate, as it enables the researcher to obtain data about practices, situations or views at one point in time through questionnaires or interviews (Oliver, 2008).

According to the research problem, survey approach was selected as the research approach for this study and used to collect the information from a sample of individuals through their responses to questions, since it tends to identify the reasons behind the less identification of insurance in post disaster recovery planning in business community. The study's concern involves with only about the persons who are having experience in disaster insurance in the insurance industry and disaster management in the business community. Purposive sampling method under non random sampling technique is most preferred for this research and criteria for selection experts are also decided accordingly. The unit of sample for the pilot interview was decided as experts who are involved with the disaster insurance in insurance companies and disaster management; specially in post disaster recovery planning in small and medium scale business community.

Sampling size for the purposive sampling method is determined on the basis of theoretical saturation, sample size for the pilot interview was limited into five experts in insurance companies and the sample size of the detail survey was limited to eight individuals of small and medium scale business community as it was saturated at that point.

Accordingly, semi structured interview survey is conducted within the selected sample group for both pilot and the detail survey. In doing so, selected sample represents the whole population and data from that sample can also be applied to the rest of the population of both insurance and business community sectors.

For this study it is identified semi structured interview is the most appropriate technique to investigate the research problem. The collected data was analyzed content analysis method.

Table 1 represents the description of selected samples for pilot survey and Table 2 represents the description of selected samples for detail survey.

Table1: Description of Selected Experts for Pilot Interview

Expert	Designation	Area of Expertise
PEI 1	Senior Manager	Disaster Insurance
PEI 2	Assistant General Manager	Disaster Insurance
PEI 3	Marketing Manager	Disaster Insurance
PEI 4	Underwriting clerk	Disaster Insurance
PEI 5	Sales Manager	Disaster Insurance

Table2: Description of Selected Experts for Detail Interview

Expert	Designation	Business Area	
DEI 1	Proprietor	Manufacturing	Disaster Management and Post Disaster Recovery Planning
DEI 2	Finance Manager	Manufacturing	Disaster Management and Post Disaster Recovery Planning
DEI 3	Operation and Manager; Administration	Export Trading Company	Disaster Management and Post Disaster Recovery Planning
DEI 4	Personnel Manager	Manufacturing	Disaster Management and Post Disaster Recovery Planning
DEI 5	Marketing Manager	Manufacturing	Disaster Management and Post Disaster Recovery Planning
DEI 6	Proprietor	Hotel	Disaster Management and Post Disaster Recovery Planning
DEI 7	Finance Manager	Educational Institution	Disaster Management and Post Disaster Recovery Planning
DEI 8	Finance Manager	Manufacturing	Disaster Management and Post Disaster Recovery Planning

## Study findings

Findings of the study are discussed under insurer's perception on insurance and insured perception on insurance. Further insurer's perception on insurance are categorized as current natural disaster policies, consent for obtaining disaster insurance policies and challenges and issues. Insured's perception on insurance are categorized as awareness of natural disasters approach to recover disaster losses and perception as a risk transfer mechanism.

### ***Insurer's perception on insurance***

Insurance companies offer disaster insurance covers as extensions of fire and lightning policy. Fire and lightning cover is the basic cover, a person who wants to purchase disaster insurance, must also purchase a fire and lightning policy. Additional covers that included with this policy are strike, riot, and civil commotion cover, Malicious damage cover, Terrorism cover, Explosion cover, Impact damage cover, Aircraft damage cover, Spontaneous combustion cover, Electrical extra cover and Natural disaster cover. Basically, this natural disaster cover includes number of natural perils. After obtaining this cover, the insured is protected from damages and losses that are directly caused by these mentioned natural disasters. According to this natural disaster cover, insured can recover their loss or damage directly caused by earthquake, volcanic, Eruption, Hurricanes, Typhoon, Windstorm, Hails Storm, Thunder Storm, Tornado, Tsunami, Tidal Waves, Cyclone, Storm, Tempest and flood and so nominated by

the Meteorological Department of Sri Lanka or Geological Survey and Mines Bureau of Sri Lanka. The policy mentions that the insured is not liable for any compensation for his damages and losses in a situation where inundation by the sea if not caused by the aforementioned covered perils, other atmospheric disturbances and convulsions of nature not related to the aforementioned covered perils, earth slips, landslides, subsidence and sea erosions. Similarly, no insurance will be offered in the areas which have a higher frequency of disaster risk, In case they do, it is accepted only under the higher premium payment or higher amount of deductibles. The reason behind is that the insurance companies are profit oriented companies and always looking forward to earn profit. Indemnify the insurer in every frequent disaster situation may not be either reliable or profitable for the company. Therefore such people have to find other instruments to recover their losses and damages in a disaster situation. Business community consent for disaster insurance is not in acceptable level. Even a business organization is aware about the potential risk of natural disaster, an incorrect estimate of the volume of the loss and probability of occurrence may result in the business choosing not to purchase disaster insurance. In some situations having an insurance cover for the property is compulsory requirement when granting loans from lending institutes. Due to that reason, some people are obtaining an insurance cover; hence their main purpose is to obtain the bank loan and not the disaster insurance cover. Furthermore, factors affecting to demand on insurance can be identified as business community’s risk perception and risk preference, limited budget and the cost of the disaster insurance. Equally, expectation for government aids after disasters may be the reason to not obtaining a disaster insurance cover by the business community. Thus, this further indicates that, if the business organization already taken all the possible precautions by investing a considerable amount of money they will not going to spend money on insurance. It is unavoidable that creating issues and challenges in the insurance industry. The study revealed that most of the errors arise by the insured namely unawareness of the insured about the policy document that includes the exclusions of the particular cover. Misrepresentation and non-disclosure, ignorance of insurer’s instructions, frauds of the insured and moral hazards are the main challenges that the company has to be faced.

**Insured perception on insurance**

Disaster threat is different from area to area, and disasters that are frequently experienced in Sri Lanka are the droughts, flood, landslides, and storm. Eastern and Northeastern parts of the Sri Lanka are highly vulnerable to cyclones. Further, the Eastern, Northern, and North central provinces are prone to flooding. Not only the business organizations in frequent disaster prone areas, but also the businesses in other area are aware about the natural disasters as it may be a threat to their businesses.

Awareness of people about disasters in particular area depends on their past experience. Even people are aware about the increasing of disaster, not much concern about the disaster insurance since their area is not vulnerable to disasters. Accordingly, the study found that gaining of protective measures to recover the damages has been limited only for the disaster prone area. Since, disasters are uncertain things, most of the people who are not living in a disaster prone area have negative perception on insurance. Rather than taking pre disaster planning for an unseen situation, people more prefer to take the risk. Factors affecting to obtain disaster insurance are shown in Figure 2.

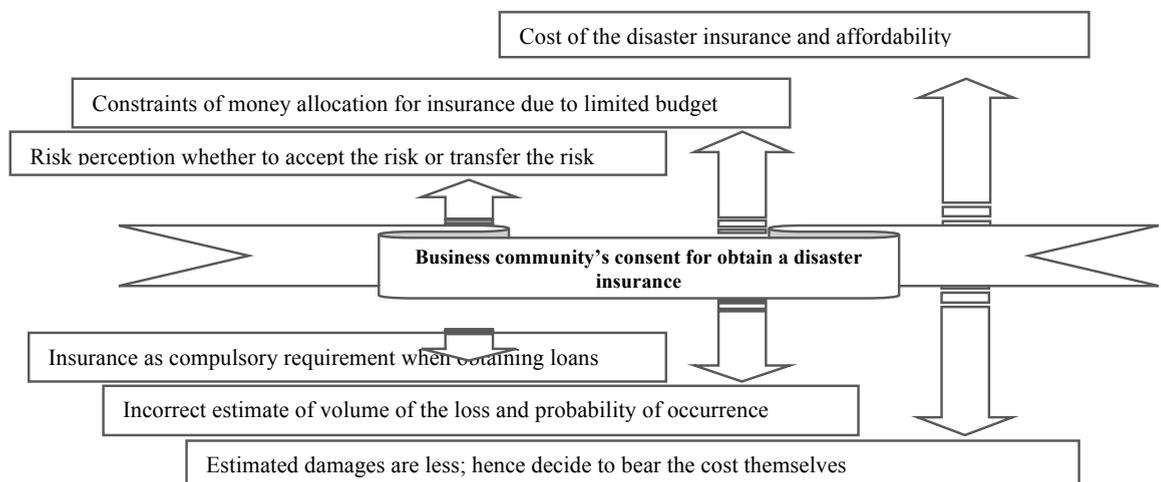


Figure 2: Factors affecting to obtain disaster insurance

Every business must be guided from a proper approach to manage the disaster losses for property in an unexpected situation in future. It will assist to enhance the company's ability to recover from financial losses by avoiding the loss of market share and damages to equipment and products. Some people have purchased a natural disaster cover to recover their potential damages from natural disasters based on their past experience. If people have examined that there is a potential risk of occurrence of disaster, after taking all the possible measures and necessary precautions to mitigate the risk, remaining risk has been transferred to the in order to protect their properties and businesses from the natural disasters. Some insured have been obtained an all risk insurance cover for every potential risk which may be occurred in future. In such situation risk is not specified as natural disaster and recovers the damages caused by all mentioned perils in the policy. Nevertheless, those people are not aware of the content of the policy, whether it includes the natural disaster cover or not. Thus, it proves that people, who do not live in a disaster prone area, do not considered natural disaster insurance cover as an essential. Moreover, people with past disaster experiences normally go for disaster insurance in order to recover their potential disaster risks and people living in the less frequent disaster areas are not much considerate about disaster insurance as a compulsory requirement for continuous business operation.

In a situation where damages occur due to disasters, insured also has to bear the particular percentage from total loss as agreed in the contract which is called "compulsory excess". Similarly, the claim for total damage of the insured is reduced due to under insurance of the property. Most of the time the insured are underestimating their property value with the idea of reducing the premium amount. In such situation, the insurer pays a percentage value of the damage as according to the sum insured of the property. Furthermore, if an insured is going to under insure the property where sum insured is less than the actual value of property, he cannot be indemnified the totally. However, majority of the people are in a positive mind of insurance. Nevertheless, according to their perception some issues are also being identified. According to the literature disaster brings direct and indirect impacts for the business community. Similarly insured mentioned that in a flood situation they had to face many difficulties namely stop the production, time and material waste, delay the delivery process, damages for the production machineries and risk of losing the market share. Further, insurance is most important to transfer the risk and reinstate the business within shorter period of time.

Moreover, as one of the natural disaster flood cover is restricted to situations where escape of water from the normal confines of any natural or artificial watercourse, lake, reservoir, canal or dam. However, one of the unhappy insured was in a situation where his water sump which is located in underground mixed with the waste water in rainy days. Insured mentioned that even insured asked claim was rejected by the insurance company as it is not covered by the policy. The issue arises not because of the insurer fault, but the unawareness of the insured on the policy document. Since this kind of situation leads to create unhappy customers within the industry, insurance company also has great responsibility to avoid such situation while improving the awareness of the insured regarding the policy document. Findings revealed that business community obtaining fire insurance policy because having an insurance cover for the property is compulsory requirement when granting loans from lending institutes. Hence their main purpose is to obtain the bank loan and not the disaster insurance cover.

Therefore, businesses with the past experience of the disaster and living in the less frequent disaster area are more preferred to obtain disaster insurance cover for their properties. The most important aspect of disaster response is to learn the lessons of previous disasters and implement improvements over time. Such business can reinstate their business with the help of insurance. Businesses are interrupted in disaster situation due to halt the production, raw material destruction, and delay in the production, delay the delivery process and damages for the production machineries. Nevertheless, there are some situations where insured cannot recover a large portion of damage in disaster situation due to facing of great financial consequences. Unsatisfactory insured are creating because of not having a proper knowledge on the insurance policy, Thus findings revealed that following recommendations to enhance the disaster insurance penetration to the business community.

## Recommendations to enhance the disaster insurance penetration to the business community

The recommendations to enhance the disaster insurance penetration to the business community are: Strong relationship between insured and insurer, Awareness programs, Public Educating, Government Involvement, Encouragement for risk assessment, Risk based premiums at affordable rates, Special attention for business community in high risk area and Increase the effectiveness of the insurer.

## Conclusion

Even all the possible measures have been taken to reduce the impact of a disaster, still there is a possibility to occur incidents which results in losses. Therefore, it is vital to implementing the planning for insurance before the disaster occurrence. By paying a premium, the business community can ensure its financial well-being. On the other hand insurance is an economic device that uses to avoid the collapsing of economic development of the country hence it spreads the risk within the society as a whole. However, it is not suitable to take decision to transfer every risk that would be resulted with losses and transferring the risk for insurance is most suitable only where the severity of risk is high and frequency of risk happening is low.

Findings revealed that insurance is not extended to any frequent disaster prone area of the country. Nevertheless, there are some situations where insurance company offers natural disaster covers for such area by increasing the premium payment and deductibles. Moreover, some issues of the current practice are also identified as less awareness, dishonesty and fraudulent practice of the insured which leads to less identification of the insurance as a risk management strategy within the business community. Perception of insured revealed that the main purpose of obtaining insurance is not only for the quick recover of business in disaster situations but also to fulfill the requirement of the money lending institutions in the country. Based on the research findings, increase the awareness of insurance, educating the insured and the government participation are identified as major steps that should be taken to be increase the insurance penetration to the business community.

This research contributes to the knowledge of disaster insurance policy available in insurance industry and presents the recommendation in order to increase the insurance penetration to the business community. It includes awareness programs, public education, maintain strong relationship, government involvement, and increase the effectiveness of the insurer.

## Limitations

This survey was limited to Sri Lanka and it also could not be extended to a frequent disaster prone area of the country. Similarly, this research was targeted insurance and disaster management in Sri Lanka and limited to small and medium scale organization only affected by natural disaster.

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