

**FACTORS INFLUENCING DEMAND FOR MOTOR VEHICLE
INSURANCE IN NEPAL**

A Dissertation submitted to the Office of the Dean, Faculty of Management
in partial fulfillment of the requirements for the Master's Degree

By

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CERTIFICATION OF AUTHORSHIP

I hereby corroborate that I have researched and submitted the final draft of dissertation entitled "FACTORS INFLUENCING DEMAND FOR MOTOR VEHICLE INSURANCE IN NEPAL". The work of this dissertation has not been submitted previously for the purpose of conferral of any degrees nor has it been proposed and presented as part of requirements for any other academic purposes. The assistance and cooperation that I have received during this research work has been acknowledged. In addition, I declare that all information sources and literature used are cited in the reference section of the dissertation.

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REPORT OF RESEARCH COMMITTEE

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This dissertation entitled "FACTORS INFLUENCING DEMAND FOR MOTER VECHICLE INSURANCE IN NEPAL " has been prepared in partial fulfillment of requirements for the degree of Masters of Business Studies (MBS), Tribhuvan University. It aims to get a glimpse of necessity of insurance of motor vehicle along with the influencing components effecting demand for such insurance and situation of the payment of claim in case of vehicles that are insured.

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ABBREVIATIONS

B.C	Before Christ
CBS	Central Bureau Of Statistics
CEA	California Earthquake Authority
DoTM	Department of Transport Management
GDP	Gross Domestic Product
IAG	Insurance Australia Group
IB	Insurance Board
Km	Kilometre
LIC	Low Income Country
LIC	Life Insurance Corporation
Ltd.	Limited
MoF	Ministry of Finance
NEPSE	Nepal Stock Exchange
NIC	National Insurance Commission
NICL	Nepal Insurance Company Limited
NLGIC	National Life and General Insurance Company Limited
PDNA	Post Disaster Needs Assessments
SEBI	Securities Exchange Board Of India
SGIC	Sanima General Insurance Company Limited
SICL	Shikhar Insurance Company Limited
UAICL	United Ajod Insurance Company Limited
USD	United States Dollar

ABSTRACT

This research looked into the call for the factors influencing demand for motor vehicle insurance in Nepal based on three independent variables consisting of motor vehicle sales, length of road and number of road accidents and dependent variable motor insurance premium. Sample consisted of Shikhar Insurance Company Limited, Prabhu Insurance Company Limited and Siddartha Insurance Company Limited out of 14 non-life insurance companies. Convenient sampling technique was used. The descriptive and historical research design has been used and Microsoft Excel was employed in order to analyze the data on correlation and regression method. Data were secondary and obtained from data provided by Nepal Insurance Authority, Department of Transport Management, Department of Road, Traffic Nepal Police, Financial Statistics, Annual Report of the selected companies, and Quarterly Reports. The finding of the research concluded that there is significant relationship between motor vehicle sales, length of road and number of road accidents with the motor insurance premium. Additionally, the data indicated a considerable negative link between motor vehicle sales and motor insurance premiums. The length of the road and motor vehicle claims were found to have a significant, moderately positive connection. The amount of road and the number of car claims experienced had a somewhat negative association. There was a somewhat negative link found between the number of traffic accidents and auto insurance premiums. There was little link between the number of auto accidents and motor vehicle claims. On the other hand, substantial and significant association was found between the number of traffic accidents and the number of vehicle claims. On the other hand, the length of the road and the frequency of accidents showed a moderately negative link. Therefore, in order to effectively serve consumers' needs, it is advised that the company focus on site, branch network, efficient service delivery, ease of account opening, hassle-free and quick claim handling procedures, and infrastructure development. Due to the improved present procedures and assistance with policy formation, this would also be important for the insurance sector's growth and profitability. Students interested in learning about insurance businesses, the demand for auto insurance, and the impact of various factors on premium collecting for auto insurance would also find this study to be beneficial. Taken as a whole,

this study offers insightful data that is essential for non-life insurance company management, investors, and the public, and connected parties.

Keywords: Motor vehicle insurance, Insurance policy, Motor vehicle sales, length of road accidents and number of road accidents.

CHAPTER 1

INTRODUCTION

1.1. Background of the study

The economy of a country is resilient because of the financial sector that operates as a catalyst for achieving sustained economic growth through providing efficient monetary intermediation. Abundant business prospects, mobilization of savings, resourceful allocation of resources, and trouble-free exchange of goods and services are all possible because of the advancement of investment through a sound and strong financial system (Jha & Hui, 2012). In the present day, insurance companies are one of the major service businesses contributing multiple financial services to numerous individuals, domestic units, and business units being the leading constituent of the financial sector.

Nepal being a mountainous country situated in the southern lap of the mighty Himalayas with gigantic mountainous topography and landlocked nature witnessed motor vehicles not long ago. Around four-fifths of the territory of the country consists of hills and mountains though the recent trends of development, mobilization of local factors as well as foreign aid, and globalization have increased the speed of the velocity of modernized transportation (Bhattarai & Conway, 2021). The number of motor vehicles has increased with the pace of time being 801 units in 1977 to 20635 Units in 2020. As per the data of 2018 till the 15th of May 3.1 million motor vehicles travelled regularly over a rigid route between certain places. The establishment of Tejarath Adda by Prime Minister Ranadeep Singh in 1880 is thought to be the starting point of the financial system in Nepal which functioned as the bank of the government and ministry of finance in the course of Rana's reign. Nepal Bank Limited set up as the first bank of Nepal in 1937 allowed people to gain access to financial services. Preceding this period people lacked access to financial services and insurance services too were not available in the Nepalese economy. The people took the services of foreign insurance companies, commonly Indian Insurance Companies (Dongol, 2021). It was only after a decade that Nepal Insurance and Transport Company was initiated in 1947 as a subsidiary or daughter company of Nepal Bank Limited. This sole insurance company was supported by the establishment of Rastriya Beema Sansthan which was established in 1968 with the investment of the Government of Nepal. The business of non-life insurance in Nepal

was instigated in 1968. Since then, the Nepalese financial market has witnessed the establishment and operation of multiple non-life insurance companies (Shrestha, Bhandari & Joshi, 2010).

Ghimire (2023) exhibited that the business of Insurance companies has expanded remarkably which can also be witnessed through an amass of overall yearly premium earnings of 4.06 billion rupees in 2003 which has amounted to Rs.122.73 billion rupees in 2020. This shows an average yearly progression rate of 22.21 percent. Similarly, the overall investment of 12.03 billion rupees in the year 2003 amounted to 327.65 billion rupees in the year 2020. This exhibits an average yearly progression rate of 21.45 percent.

36 insurance companies are currently operating in Nepal as per the data of mid-march 2023 which encompasses 18 life insurance companies, 16 non-life insurance companies, and 2 re-insurance companies (Upadhyaya, Kharel, Aryal & Lamichhane, 2024). In the annual accounting period 2023, the funds and assets that finance actions, investments, and utilization of the insurance industry amounted to 713.47 billion Nepalese rupees which embrace 623.89 billion Nepalese rupees in life insurance and 89.58 billion Nepalese Rupees in the non-life insurance sector. As per the data for the financial year 2022 about the non-life insurance industry, the financial means and usage totaled 82.97 billion Nepalese Rupees and 521.6 billion Nepalese Rupees concerning the life-insurance industry. This indicated an 18.11 percent growth in comparison to the preceding year. Likewise, the premium of the insurance has also seen a significant increment. It stood at 30.43 Nepalese billion rupees in the financial year 2013/14 which has reached 177.81 Nepalese billion rupees in the financial year 2022/23. Along with this, the investment too has progressively augmented in the case of both life and non-life insurance. In the financial year 2021/22, the outlay extended to 682.48 Nepalese billion rupees among which the life insurance sector constituted 84.7 percent and the nonlife insurance sector constituted 15.3 percent (MoF, 2022). From mid-July 2022 till mid-March 2023, the exposure of insurance for the population of Nepal amounted from 41.2 percent to 44.05 percent. This indicated a rise of 7 percent in the exposure. The overall branches of insurance companies stood at 3329 which comprised of 2292 life insurance branches and 1037 non-life insurance company branches (MoF, 2023).

There has been a swift rise in the demand for motor vehicle insurance owing to multiple factors. Hodula, Janků, Částa, and Kučera (2020) marked out underlying determining factors

of premium of both insurance and non-insurance factors consisting of income, social security, inflation rate, life expectancy, age dependency ratio, financial development, and market concentration. A study by Ali, Hadejia, and Godara (2021) regarding the components having an effect on motor insurance in India found that there is a significant relationship between a dependent variable and a dependent variable. The insurance premium of the vehicle was the dependent variable and the independent variable consisted of sales of the automobiles, number of road accidents, distance of the road, and auto claims encountered.

1.2. Problem statement

Risk is unavoidable and uncertain. It can arise at any time in any form. Insurance is one of the ways of mitigating risk that operates like a shield that assists in recovering and recuperating again after a disastrous event. There has been an increasing number of rising investor confidence in the domestic insurance market. The Nepalese insurance business of Nepal is at a crossroads of development. With the emergent economy and intensifying mandate for insurance merchandise, there exists an immense apportion of scope for the progression and advancement of the insurance sector. Currently, there are 14 life insurance companies, 14 non-life insurance companies, 2 micro insurance and 2 reinsurance companies in operation. Likewise, there are 1789 branches of life insurance companies and 1012 branches of non-life insurance companies (Upadhyaya, Kharel, Aryal, & Lamichhane, 2024). The non-life insurance sector, basically the motor vehicle insurance sector holds ample development opportunities. Regardless of incessant enhancement and expansion in the degree of security and well-being of the road in addition to the safety of the motor vehicles and benchmark of technology, there has been an enduring uprising tendency in the frequency of road travel accidents over the years (Hsu, Shiu, Chou & Chen 2015). In the fiscal year 2018/19, there were 14,736 traffic collisions and road traffic accidents and 2789 demises concerning road crashes. Likewise, the fatality rate in Nepal was reckoned to be 15.9 deaths per one lakh population as per the National Planning Commission. In the fiscal year 2021/22, the death rate of individuals was 2883 and 7282 additional critical damages, harms, and hurt associated with road crashes. Between the period of 2022 and 2023 April, there 2320 deaths occurred 28,856 people went through injuries and several also suffered disability (National Planning Commission, 2080). The accidents due to motor vehicles kill more individuals on an annual basis in comparison to other misfortunes and natural calamities coalesce.

In the case of Nepal, it is a compulsion to do third-party insurance of motor vehicles. At the time of the renewal of the bluebook, individuals must provide the papers of insurance. Motor Vehicles and Transport Management Act (2049). In case of the death or damage to the property of the third party, the loss is compensated by the insurer. A study by Shakya (2021) exhibited that comprehensive insurance offers safety against the theft of vehicles and in addition, also offers financial safeguards against the physical damage and wounds in the body consequential to the accidents of the vehicles. Being one of the chief constituents of the financial system, the Insurance industry is the next second principal sector following banks and financial institutions.

An enormous prospect exists for the progression of motor vehicle insurance which is yet to flourish because of several barriers concerning pitiable insurance access and consumer lack of knowledge. Despite the compulsion of third-party insurance, there are ample opportunities for promoting car insurance, two-wheeler insurance, commercial vehicle insurance, third-party insurance policy, comprehensive insurance coverage, and third-party liability coverage policy.

One of the main reasons for increasing premiums in motor Insurance is that the Government of Nepal has made compulsory Insurance for the vehicles that are used for hire or reward for the transaction of Motor Insurance we have our own Motor Tariff which came into effect in 1984. Before that, we were following the Indian Tariff Calcutta region for rating and formulation of policy wordings and endorsement (Ojha, 2021). Out of the total number of vehicles insured most of the vehicles belong to government offices, Government-owned corporations, industries and business firms, Transport Companies, Agencies, and foreign diplomats. Many of the vehicles owned by private individuals are still not insured. The main reason for this is that Motor Insurance is not compulsory in Nepal Only Third Party Insurance is compulsory. In the absence of a compulsory Motor Vehicle Insurance Act in Nepal, it is only due to the increasing Insurance consciousness of the people that the demand for Motor Insurance is increasing in the country. The other reason is that the vehicles are not manufactured in Nepal and therefore all the vehicles plying in this country are imported from foreign countries and customs duty for such vehicles are very high consequently the value of these vehicles is very high and insurance premiums too and the entire vehicles owner cannot afford.

The amount of compensation in respect of the Third Party is very nominal. Many injury cases even death cases are settled out of court with the mutual agreement between the Driver/owner of the vehicle and the third party (Kuikel, Aryal, Bogati & Sedain, 2022).

So, motor vehicle insurance has become a prudential issue that might need immediate concern from the organizational viewpoint. Many researchers at the international level have conducted research to recognize the factors influencing motor insurance. However; few researches have been conducted particularly on Nepalese non-life insurance companies embracing the dimensions of determinants of motor vehicle insurance as: motor vehicle sales, number of road accidents and road length. Some researchers have conducted studies regarding the contribution of the Nepalese insurance business, situation analysis of insurance services, and the trend of the non-life insurance market. Likewise, many studies have been conducted regarding the purchasing decision of life insurance decision and business overview of insurance companies. So, this issue can be a researchable subject matter. To address this subject matter, the following research questions have been formed:

- a. What is the demand for motor vehicle insurance in Nepal?
- b. Is there any relationship between of motor vehicle sales, number of road accidents and road length on motor vehicle insurance premiums?
- c. What are the factors that influence the growth of motor vehicle insurance in Nepal?

1.3. Objectives of the study

The major objective of the study is to ascertain the demand for motor vehicle insurance in Nepal.

The specific objectives of the study are as follows:

- a. To assess the demand for motor vehicle insurance in Nepal.
- b. To examine the relationship between of motor vehicle sales, number of road accidents and road length on motor vehicle insurance premiums.
- c. To analyze the factors influence the growth of motor vehicle insurance in Nepal.

1.4. Hypothesis

Based on the intended objectives of the study, the following hypotheses will be configured:

H1: There is significant impact of motor vehicle sales on motor insurance premiums.

H2: There is significant impact of length of road on motor insurance premium.

H3: There is significant impact of number of road accidents on motor insurance premium.

1.5. Rationale of the study

The ultimate goal of insurance companies is to shield all categories of society from physical and social perils while incorporating the globally accepted insurance normal. The studies conducted by Awunyo-Vitor (2012), van Huyssteen and Rudansky-Kloppers, (2024), and Ajemunighohun & Oreshile (2014) showed that the all-inclusive motor vehicle insurance is considerably affected by factors as income levels, period of the vehicle, insight of the premium and course of action for the claims. The study demonstrated a negative association between the prices of insurance with the demand for motor vehicle insurance.

This study on factors influencing demand for motor vehicle insurance in Nepal would provide information to the management of non-life insurance companies in Nepal that would help them to pinpoint their weakness if any, in the process of collecting premiums and enhancing their profit and furnish the ideas for improvement if they feel necessity of doing so. They would also be acquainted with the factors responsible for enhancing the demand with the effectiveness of techniques currently being implemented by the companies.

An interconnection is formed between the determining factors and the demand for motor vehicle insurance to show how these two influences each other. The HR professionals can analyze the current status of demand for motor vehicle insurance and its effect on the performance of non-life insurance companies and develop insights that would help to enhance the demand for comprehensive motor vehicle insurance rather than merely third-party insurance. It would also be helpful for underwriting staff as it would increase the premium collection of non-life insurance companies. This would further be significant to enhance the profitability and growth of the insurance sector because of the upgraded current existing practices and also aiding to the policy formulation. This study would also be valuable for students who want to know about insurance companies, the demand for motor vehicle insurance, and the effect of different factors on motor insurance premium collection. As a whole, this study provides valuable information that is necessary for the management of non-life insurance companies, shareholders, the general public and related parties.

1.6. Limitations of the study

Investigations, review, and analysis of the research work are not completely limitation-free. Greener (2018) revealed that research works are bounded by certain limitations as constraints on the research approach, accessibility of the required data, deficiency of data or of dependable data, inadequate prior studies in the research area of interest, inappropriate sample size, time and budget restrictions and divergence on prejudiced outlooks and self-manipulated results and findings.

This research too has some factors that confine the boundary of the research. The following are the limitations of the study:

- a. Merely three aspects influencing the demand for motor vehicle insurance are only taken into account for the study. There might be multiple determinants of demand for motor vehicle insurance as promotion and advertisement of services offered by insurance companies, vehicle claims incurred rate of insurance policy, social security, comparative advantage in terms of attaining an advantageous position, and Quality of service variable.
- b. Time and money constraints have limited the size of the sample of this study.
- c. Out of 14 non-life insurance companies, the study is specifically limited to only three insurance companies. It excludes insurance companies that offer life insurance services and reinsurance services.
- d. Similarly, secondary data published by those insurance companies will be used in the study so the reliability depends upon it. Hence the study suffers from all those limitations that are associated with annual financial statements. The consistency and dependability of the study is reliant on the secondary data sources.
- e. The research was analyzed through five years of data published annually accounting from 2075/76 to 2079/80. This study only focuses on the analysis of motor insurance premiums of selected insurance companies.

CHAPTER II

LITERATURE REVIEW

2.1. Introduction

Literature Review is the exploration, investigation and appraisal of existing scholarly provenance with the inclination to recognize the essence for expanded research on the existing field, to find out the association of efforts in perspective of its role on the topic and to aid in the auxiliary research works. The literature review is conducted with the view to position the determining factors of motor vehicle insurance within the notion of prevailing literature and creating a justification for necessity of additional investigation and analysis on the topic. This chapter comprises the review of publications and documentary analysis on concept of insurance, motor vehicle insurance and the factors responsible for demand of motor vehicle insurance and its effect in the motor insurance premium.

It offers a synopsis of current works regarding the demanding factors of motor vehicle insurance and equates it with pertinent theories, approaches, models and gaps in the prevailing research works. This chapter aims on identifying the gaps in the previous research works regarding demand of motor vehicle insurance through books, journal articles, other publications, website along with appraisal of several inexplicit subject matter regarding the perspective. Since, at present motor vehicle insurance has become progressively more invasive issue as it has been made compulsory by the government and next due to the rising road accident cases. This chapter thus exhibits theoretical review. Further, empirical review of research determinants of demand on purchasing insurance policies is carried out guiding to the preview of the escaped gaps that are yet to be explored. On the basis of these reviews conceptual significance can be aligned for demonstrating the association between the key variables of demand for motor insurance and motor insurance premium. Conclusively, relationship between factors affecting the motor insurance demand and motor insurance premium would be ascertained through the construction of a conceptual framework.

2.2. Conceptual Review

It is a technique for amalgamating and integrating research confirmation that is principally helpful in exploring intricate interferences. It presents a valuable framework for recognizing

and contending with synthesis of the accessible research works regarding the demand for motor vehicle insurance. Being a diagnostic and investigative tool, conceptual review sets sights for arranging, classifying and explaining the concepts pertinent to the area of study and demarcates an association between the taking account of applicable theory and empirical research (Onu, Kessler, & Smith, 2016). It is an analytical instrument consisting of numerous deviation and circumstances and most commonly applied to create conceptual differences among various studies and put the ideas in order. The research is performed by viewing and analyzing previously existing information on a specified subject matter rather than administering practical tests and experiments. It is associated to theoretical notions or ideas (Amundsen & Wilson, 2012). It plays a crucial role in new theories development or by investigating the already present literatures regarding factors influencing the demand of motor vehicle insurance and it further seeks to analyze and appraise determining factor for motor insurance demand along with conferring about meaning and theories allied to chosen dependent and independent variables. A summation of preceding empirical research works conducted in Nepal would also be included. Conceptual framework of this study would also be emphasized. This portion is thus review of associated literature works conducted which endows with explanation of significant literature to demand of motor vehicle insurance, factors influencing motor vehicle insurance and its effect on motor vehicle insurance.

2.2.1. Meaning of Insurance

A legalized agreement carried out between the person or business purchasing the policy also known as insured and the company offering the insurance also known as insurer is known as insurance. The insurer is obliged to compensate definite sum of money to the insured in the instances of any in case any inopportune incident or crisis emerged such as unexpected demise, accidental wounds and impairment, damage to vehicle, house, etc. Insured is required to defray the cost of specific regular amount to the insurer avowed as the premium (Abraham, 2012). David (2015) defines premium as the pre-agreed sum which is endured by the policyholder to obtain assured amount of insurance assurance. It can be paid outright or each month or on a quarterly basis or annual basis, for the stage of the premium payment tenure of insurance policy. Ewald (2019) defined insurance as the financial hazard management instrument in which the insured passes a risk of probable financial shortfall to

the insurance company that diminish it in substitute for financial reimbursement also called as the premium amount.

2.2.1.1. Definition: Definition of insurance can be made from two points of view:-

a. Functional Definition: Insurance is a co-operative device to spread the loss caused by a particular risk over a number of persons who are exposed to it and who agree to ensure themselves against that risk.

Thus insurance is:-

- i. A co-operative device to spread the risk;
- ii. The system to spread the risk over a number of persons who are insured against the risk
- iii. The principle to share the loss of each member of the society on the basis of probability of loss to their risk; and
- iv. The method to provide security against losses to the insured

b. Contractual Definition: A contract of insurance is any contract whereby one party assumes the risk of an uncertain event which is not within his control, happening at a future time, in which event the other party has an interest, and under which contract the first party is bound to pay money or provide its equivalent if the uncertain event occurs.

- i. Insurance is a contract wherein one party agrees to pay to the other party or his beneficiary, a certain sum upon a given contingency against which insurance is required.
- ii. A contract of insurance may be defined as a contract where by one person , called the ‘insurer, undertakes , in return for the agreed consideration, called the “premium”, to pay to another person, called ‘assured”, a sum of money or its equivalent on the happening of a specified event..
- iii. A contract of insurance is a contract either to indemnify a person against a loss which may arise on the happening of an event or to pay a sum of money on the happening of some or any event for an agreed consideration.

2.2.1.2. Essential Elements of Insurance

Sethi and Bhatia (2023) have stated the following essential elements of insurance.

There must be a contract between parties who are called the ‘insurer’ and the ‘insured’,

- i. The contract must be that the insurer undertakes to protect the insured from any loss or damage to be insured on the happening of the event.
- ii. In consideration for the above, the assured undertakes to make the insurer a periodical payment of money called premium.
- iii. The contract must be in writing and the document is called the insurance policy.

2.2.2. Classification of Insurance in Nepal from Business Point of View

A. Life Insurance.-

Life insurance is a contract between an insurer and a policyholder in which the insurer guarantees payment of a death benefit to named beneficiaries upon the death of the insured. The insurance company promises a death benefit in consideration of the payment of premium by the insured (Lehtonen, 2014).

The purpose of life insurance is to provide financial protection to surviving dependents after the death of an insured. It is essential for applicants to analyze their financial situation and determine the standard of living needed for their surviving dependents before purchasing a life insurance policy. Life insurance agents or brokers are instrumental in assessing needs and establishing the type of life insurance most suitable to address those needs. It is prudent to re-evaluate life insurance needs annually, or after significant life events like marriage, divorce, the birth or adoption of a child and major purchases, like a house.

The insurance companies which are operating only the life insurance business are as mentioned below-

Table 1

List of Life Insurance Companies

S.N	Name of Life Insurance Company	Functioning Since
1	Rastriya Jiban Beema Company Limited	2025 B.S (1969 A.D)
2	National Life Insurance Company Limited	2044 B.S (1988 A.D.)
3	Nepal Life Insurance Company Limited	2058 B.S (2001 A.D)

4	Life Insurance Corporation (Nepal) Limited	2057 B.S (2000 A.D)
5	MetLife (ALICO)	2058 B.S (2001 A.D)
6	SuryaJyoti Life Insurance Company Limited	2079 B.S (2023 A.D)
7	Himalayan Life Insurance Limited	2080 B.S (2023 A.D)
8	Asian Life Insurance Company Limited	2064 B.S (2008 A.D)
9	IME Life Insurance Company Limited	2074 B.S (2017 A.D)
10	Reliable Nepal Life Insurance Company Limited	2074 B.S (2017 A.D)
11	Sanima Reliance Life Insurance Limited	2079 B.S (2023 A.D)
12	Citizen Life Insurance Limited	2074 B.S (2017 A.D)
13	Sun Nepal Life Insurance Company Limited	2074 B.S (2017 A.D)
14	Prabhu Mahalaxmi Life Insurance Limited	2080 B.S (2023 A.D)

Source: Nepal Insurance Authority

B. General Insurance (Non-Life Insurance)

Non-life insurance is also called general insurance. Any insurance other than life insurance is known as non-life insurance. Because of its nature of measuring any risk in terms of money, it is also said as pure insurance. General insurance is the insurance of property and liable risk of insured against most specified cost that is premium. It also includes property insurance, liability insurance and others forms of insurance (Park& Lemaire, 2012).According to

Ohlsson and Johansson (2010) This part of insurance includes the insurance and risk transfer of the property and liability of insured where property insurance against loss arising from the ownership or use of property includes two general classifications. The first indemnifies the insured in the event of loss growing out of damage too or destruction of his/her property. The second form pays damages for which the insured is legally liable the 14 consequence of negligent acts that result in injuries to other person or damage to their property. This is known as liability insurance”.

As put forward by Sood, Kaur and Grima (2022), General insurance is designed according to the customer necessity and it is very appropriate for covering any kind of uncertainty in future. It can play a vital role in building a progressive business by assuring their business activities. This will propel individuals and business sectors to take risk and be successful in future.

There are different kinds of non-life insurance classified according to their nature, which are as follows:

Table 2

List of Non-Life Insurance Companies

S.N	Name of Non-Life Insurance Company	Functioning Since
1	Nepal Insurance Company Limited	2004 B.S (1947 A.D)
2	The Oriental Insurance Company Limited	2012 B.S (1956 A.D)
3	National Insurance Company Limited	2030 B.S (1974 A.D)
4	Himalayan Everest Insurance Company Limited	2079 B.S (2022 A.D)
5	United Ajod Insurance Company Limited	2080 B.S (2023 A.D)

6	Neco Insurance Limited	2051 B.S (1994 A.D)
7	Sagarmatha Lumbini Insurance Company Limited	2079 B.S (2023 A.D)
8	Prabhu Insurance Limited	2053 B.S (1996 A.D)
9	IGI Prudential Insurance Limited	2080 B.S (2023 A.D)
10	Shikhar Insurance Company Limited	2061 B.S (2004 A.D)
11	NLG Insurance Limited	2054 B.S (1998 A.D)
12	Siddhartha Premier Insurance Limited	2079 B.S (2023 A.D)
13	Rastriya Beema Company Limited	2071 B.S (2015 A.D)
14	Sanima GIC Insurance Limited	2079 B.S (2022 A.D)

Source: Nepal Insurance Authority

1. Fire/Property Insurance

The insurance policy that covers loss and damages caused by fire is called fire insurance. It is a contract made to compensate a certain loss or damage during the policy period caused by fire. Fire insurance plays a pivotal role in compensating the losses as it can cause a huge destruction of valuable property. However, the policy of fire insurance can be modified according to need of insurer that may include wide range of danger close to fire like wind, storm, earthquake, terrorism, explosion, and landslide. Fire insurance contract can be customized by changing the premium as for the need of insurer (Dryden, 2021).

2. Motor Insurance

Adhikari (2020) defined motor insurance as the form of policy that shields the vehicles from probable risks monetarily and offer financial defense beside harms and injuries occurring because of accidents and further threats. In case of Nepal, third party motor insurance is mandatory at the time of renewal of license.

Automobile insurance has immense impact in sharing the loss and controlling the damage caused from vehicles. It includes car insurance, two wheeler insurance, commercial vehicle insurance, third party insurance policy, comprehensive insurance coverage policy and liability only policy. This insurance policy helps by covering the losses and damages resulting due to accidents of vehicles. With the growing number of vehicles in the street, road accidents have been major threat compared to other means of transport. Automobile insurance policy generally covers property, liability, and medical expense according to the contract made between insurance company and insurer (Yadav, Tripathi & Tripathi, 2022).

3. Marine Insurance

The marine insurance is the oldest form of insurance that originated from Greek and maritime loan. This insurance policy is focused on insuring the loss or damage involved during transportation of goods from the points of loading to unloading of the goods. It is very essential insurance for the shipping industry as it protects against loss or damage by peril of the sea and generally, through the hazards of transit (Kajwang, 2022). In fact, marine insurance provides all kind of assurance during a given period of voyage that include from natural disaster to other manmade disaster. The modern marine insurance policy provides the protection against inland transit loss arising on the way to seller and buyer. Thomas (2023) classified Marine insurance into following categories:

- Hull insurance
- Cargo insurance
- Freight insurance
- Liability Insurance

4. Miscellaneous Insurance

It includes Travel Medical Insurance, Bankers Blanket Policy, Student Safety, Group Personal Accident, Plate Glass, Cash in Transit, Public Liability, accidental insurance, money insurance, Professional Indemnity, Product Liability, Burglary and House Breaking Insurance, Worker's compensation insurance, Household insurance etc. Additional forms of insurance except life, fire and marine insurance are included in this miscellaneous insurance (Mishra & Mishra, 2011).

5. Engineering Insurance

This insurance policy helps in covering losses and damages occurring in construction and engineering industries. It covers against damages caused in engineering equipment and plants during the construction stage. From the small machinery to big equipment, everything is insured under these policies that enable a sound completion of the consignment. This insurance that offers financial protection to the risks confronted by the continuing construction ventures, installation ventures and machinery, tools and equipment in project procedure (Bunni & Bunni, 2022).

6. Aviation Insurance

It is the insurance against claims and losses arising from the ownership, maintenance, or use of aircraft, hangars, or airports including damage to aircraft, personal injury, and property damage. It provides hull liability and property coverage for aircraft. This policy protects the owners and/or operators of an airplane from damage in the event of a crash. It also pays for medical bills and potential lawsuit damages from injured or killed passengers and other persons (Lane, 2005).

7. Micro Insurance

It is the new insurance policy which is targeted for low class family members. It has provided benefits to the low income people and provides protection against their home, cattle, crops and medical health benefit. The premium rate is so low that it is specifically designed for them to afford the cost. This product is explicitly projected for the fortification of impoverished people; with reasonably priced insurance products to aid them deal with and recuperate from financial shortfall (Platteau, De Bock, & Gelade, 2017). The micro insurance business is divided into life and non-life insurers.

The following micro life and non-life insurance are in operation in Nepal:

Table 3

List of Micro Life Insurance Companies

S. No.	Micro Life Insurance Companies	Operating Since
1	Crest Micro Life Insurance Limited	2080 B.S (2023 A.D)
2	Guardian Micro Life Insurance Limited	2080 B.S (2023 A.D)
3	Liberty Micro Life Insurance Limited	2080 B.S (2023 A.D)

Table 4

List of Micro Non-Life (General) Insurance Companies

S. No	Micro Non-Life (General) Insurance Companies	Operating Since
1	Nepal Micro Insurance Company Limited	2080 B.S (2023 A.D)
2	Protective Insurance Company Limited	2080 B.S (2023 A.D)
3	Star Micro Insurance Company Limited	2080 B.S. (2023 A.D.)
4	Trust Micro Insurance Company Limited	2080 B.S. (2024 A.D.)

Source: Nepal Insurance Authority

8. Agriculture Insurance

Agriculture Insurance is purchased by agricultural producers, farmers and others to protect themselves against either the loss of their crops due to natural disasters, such as hail, drought, and floods. It is a newly emerging type of insurance in Nepal. In case of this Insurance, farmers are liable to pay only 25% of the total premium; remaining 75% is subsidized by the Nepal Government so that most of the farmers are benefited by this policy (Ghimire & Kumar, 2011).

9. Re-Insurance Company

Reinsurance is insurance that is purchased by an insurance company, in which some part of its own insurance liabilities is passed on ("ceded") to another insurance company. The company that purchases the reinsurance policy is called a "ceding company" or "cedent" or "cedant" under most arrangements. The company issuing the reinsurance policy is referred simply as the "reinsurer". In the classic case, reinsurance allows insurance companies to remain solvent after major claims events, such as major disasters like hurricanes and wildfires. In addition to its basic role in risk management, reinsurance is sometimes used to reduce the ceding company's capital requirements, or for tax mitigation or other purposes (Bressan, 2018).

The following re-insurance companies are in operation in Nepal:

Table 5

List of Reinsurance Companies

S. No	Reinsurance Company	Operating Since
1	Nepal Reinsurance Company Limited	2071 B.S (2014 A.D)
2	Himalayan Reinsurance Company Limited	2077 B.S (2020 A.D)

2.2.3. Principles of insurance

Insurance is based on different principles. In order for the relationship between the insurer and the insured to work, there are certain important principles that must be upheld by the both parties.

a. Principle of Utmost Good Faith

An insurance contract is based on the principle of utmost good faith — that is, a higher degree of honesty is imposed on both parties to an insurance contract than is imposed on parties to other contracts. This principle has its historical roots in ocean marine insurance. An ocean marine underwriter had to place great faith in statements made by the applicant for insurance concerning the cargo to be shipped (Denenberg, 1963).

The property to be insured may not have been visually inspected, and the contract may have been formed in a location far removed from the cargo and ship. Thus, the principle of utmost good faith imposed a high degree of honesty on the applicant for insurance. The principle of utmost good faith is supported by three important legal doctrines: representations, concealment, and warranty (Mishra & Mishra, 2011).

b. Principle of Insurable Interest

The principle of insurable interest is another important legal principle. The principle of insurable interest states that the insured must be in a position to lose financially if a covered loss occurs. For example, you have an insurable interest in your car because you may lose financially if the car is damaged or stolen. You have an insurable interest in your personal property, such as a computer, books, and clothes, because you may lose financially if the property is damaged or destroyed (Gupta, 2011).

c. Principle of proximate Cause

Proximate cause is defined as the active and efficient cause that sets in motion a chain of events which brings about a result, without the intervention of any force started and working actively from a new and independent source. The dominant, effective or operative cause of an event is known as the proximate cause. If there is a chain of events leading to this cause, it should be examined, whether the first cause was an insured peril and whether the ultimate

cause has resulted from an uninterrupted chain of events, without an independently intervening cause interfering in between (Rejda, 2005).

When there is a series of events that lead to a loss and if all the events are insured perils then there is no need to identify the proximate cause as all the events are insured perils and the claim would anyway be paid by the insurance company. Identifying the proximate cause is not easy at all by the insurance company. Identifying the proximate cause is not easy at all and making a judgment on the basis of that is equally difficult. Many a times, the insured does not accept the insurance company's decision and seeks judicial intervention (Gupta, 2011).

According to the principle of proximate cause an insurance policy is designed to provide compensation only for such losses as are caused by the perils, which are stated in the policy. The liability of the insurer arises only if the loss is caused by a peril, which is specifically covered under the policy. However, the loss is not payable if it is caused by a peril, which is excluded under the policy or is not mentioned. It is thus necessary to ascertain the cause of loss to decide whether it is payable under the policy or not (Gulati, 2009).

D. Principle of Indemnity

Vaughan and Vaughan (2007) stated the principle of indemnity that the insurer agrees to pay no more than the actual amount of the loss; stated differently, the insured should not profit from a loss. Most property and casualty insurance contracts are contracts of indemnity. If a covered loss occurs; the insurer should not pay more than the actual amount of the loss. A contract of indemnity does not mean that all covered losses are always paid in full. Because of deductibles, dollar limits on the amount paid, and other contractual provisions, the amount paid is often less than the actual loss.

e. Principle of Loss Minimization

Under this principle it is the duty of the insured to take all possible steps to minimize the loss to the insured property on the happening of uncertain event. According to the Principle of Loss Minimization, insured must always try his level best to minimize the loss of his insured property, in case of uncertain events like a fire outbreak or blast, etc. The insured must take all possible measures and necessary steps to control and reduce the losses in such a scenario. The insured must not neglect and behave irresponsibly during such events just because the

property is insured. Hence it is a responsibility of the insured to protect his insured property and avoid further losses (Gulati, 2009).

f. Principle of Subrogation

The principle of subrogation strongly supports the principle of indemnity. Subrogation means substitution of the insurer in place of the insured for the purpose of claiming indemnity from a third party for a loss covered by insurance. Stated differently, the insurer is entitled to recover from a negligent third party any loss payments made to the insured (Thoyts, 2010).

g. Principle of Contribution

The principle of contribution ensures that if there is more than one insurance policy drawn up on the same subject matter, the insured cannot recover their loss from all the insurers, in which they will recover more than their loss, or even make a profit (Outreville, 2012).

The principle of contribution ensures two things:

1. The insured does not profit by making separate claims from multiple companies for the same event.
2. Each insurer pays only their proportionate share of the loss.

The principles of subrogation and contribution do not apply to life insurance policies or personal accident policies. This is because loss of life and human suffering can never be fully assessed or compensated. The principles of subrogation and contribution apply only to contracts of indemnity. So they apply only to general insurance contracts. The two principles don't apply to life insurance and personal accident insurance (Cutler & Zeckhauser, 2004).

2.3. Theories of Insurance

2.3.1. Theory of Co-operation

Up to the commencement of Christian epoch, from the time when human beings came in existence in a society, all family unit residing in a society were accustomed to donate in a general fund that would be employed to compensate to individuals coping with property losses or to shell out for means of support of people who were reliant on the person who has passed away. Thus, they were agreeable to contribute to the death of an associate of the group or neighborhood. This notion progressed and has turned out to be the foundation of cooperative societies, mutual funds and insurances in the contemporary era (Giles, 2012). In

the present day, insurer endures the accountability and liability of acquiring sufficient finances from people in a society in an attempt to cover up the hazards individuals hold and so that the members of community disburse for the member abiding losses at the incident of the insured circumstance or insured peril. Inducement similar to premium are set to render people adhere to the system of insurance and collaborate to contribute to the losses of each and every one by giving advance premium (Thoyts, 2010).

It is frequently surmised that an insurance agreement similar to the other contract encompasses dual active partaker and does not entail any third-force backing. Even though the insurer and insured are the crucial stakeholders in an insurance contract, their mutual dependence to execute the contract is not completely bounded to them. The theory of cooperation fundamentally connects the insurance contract of the individual alongside the community as a whole. Formed on the base adage of "all for one and one for all", theory of cooperation's modern relevance can be explained as a reciprocal contract between the company that involves in the issuance of policy, managing the claims incurred and selling the policies and the society (Rejda, 2005). The insurance company is required to acquire enough finances from the members of society and compensate them back from the gathered finances at the time of incident of the risk that has been insured. Since insurance is a cooperative tool, every insurance contract must have a mutually dependent paradigm as its foundation. Any insurance policy has real-world execution of this principle.

The insurance contract's cooperation clause encloses the principle of cooperation between the insurer and the insured, imparted that the center of attention is pointed from society as a whole to just one policyholder. A section of an insurance contract baptized as the "Assistance and Cooperation Provision" or the "Cooperation clause" appeals for the policyholder to sustain the insurer in the happening of a claim. If the insured risk appears, the insurer guarantees that the ensuing danger is coherent with the insured risk and is sheltered by the policy (Lowry, Rawlings & QC, 2011).

2.3.1.1. Theory of cooperation and principle of indemnity

The clause of cooperation gives support to keep up the lawful proposition of indemnity in insurance. In conformity with the principle it is required subsist a genuine loss and the loss is requisite to have derived from the risk shielded and the loss is essential to be estimated in

terms of cash for an incurred claim to be endorsed (Stempel, 2009). In addition, the influencing concepts set up the succeeding objectives:

The most important purpose is to prevent the insured from generating money owing to the loss. Likewise, reduction of the moral hazard is the goal next in order. In consequence, the policy holder attains goals customary by the lawful notion of indemnity and theory of cooperation substantiates they are open and truthful about the incidents particulars (Priest, 2016).

2.3.2. Theory of Probability

Practically, theories facilitates the insurance companies to prevent counterfeit claims and other deceptive and devious undertaking that operate against the objectives set by Insurance authority of each countries along with additional global insurance laws and order. These clauses can span from cooperation clauses upgrading the clarity, openness and directness to appraisal strategy that take the edge off risks associated with policy (Asmussen & Steffensen, 2020).

Being a statistical technique for predicting the possibility of a future occurrence, the theory of probability is often referred to as the probability theory or theoretical probability. This is an approach that is exercises by the insurance companies in order to formulate the policies as well as to fix the amount of insurance premium. This theory hunts for discovering model or archetype in the repetition of different forms of events. Probability is a frequently utilized mechanism in the data science in order to explicate the circumstances where comparable experiments present diverse results. Tossing a coin or rolling dice can be example of this probability (Brady, 2023).

So, this theory is a statistical technique employed by the insurance companies to predict the likelihood of an upcoming happening as well as to investigate the data and information with the purpose of finding out and taking charge of the risk for designing policies or agree on premium value or cost (Gorge, 2016).

It is highly utilized by the property and liability insurance companies to examine the risk. The vehicle accident or clash is dependent on the age of the driver and sex as per the statistics. The inspection of the category of the insured vehicle, geographic setting of the driver and distance voyaged on a frequent basis. For instance, the more distance travelled by

a driver on a regular basis signifies the higher probability of occurrence of accident (Feng, 2023).

2.3.3. Utility theory of insurance

The continuation of insurance business is dependent on the readiness of the individual to defray the cost of insurance companies. The readiness of the person undertaking the insurance policy to pay a premium excessive than the net premium, which is the statistical or computational approximation of the loss that has been insured is conceivable through an economic theory (Borch, 1961). In the opinion of this thought, the individual who determines or decides allocates a value $U(w)$ more willingly than only w to his wealth w , habitually without apprehending it. This value is designated as utility function or $u(\cdot)$. $E[u(w - X)]$ is contrasted $E[u(w - Y)]$ with a view to find out accidental loss out of X and Y , and thereby maximum expected utility is selected. The person embarking on to take an insurance policy and holds wealth (w) can make use of this paradigm as a means of estimating maximum premium P he is ready to give in the occurrence of an accidental loss (Kaas, Goovaerts, Dhaene & Denuit, 2008).

2.4. Meaning of Motor Vehicle Insurance

A. Nature and scope

A policy of motor vehicle insurance is, in the ordinary course, a combined insurance. It insures the damage to the motor vehicle and its accessories, liability for damage to property, death of, or injury to, the assured himself or spouse and it also insures the motor vehicle against the risk of liability for injury to, or the death of third parties caused by driver's negligence.

B. Definition of Motor Vehicle

A "motor vehicle" is defined as "a mechanically propelled vehicle intended or adapted for use on roads." It is not enough that a vehicle can be used on a road; it must be "intended or adapted" for such use.

The basic test of whether a motor vehicle is intended for use on roads is objective, and is whether a reasonable person looking at the vehicle would say that one of its users would be a road user.

The meaning of term “adapted” is uncertain. It has been held to mean either “altered” on a semi-permanent basis for use on roads” or alternatively, “fit and apt” for such use (Putra, Aswariningsih, Napitupulu, & Safrizal, 2022).

The following are excluded from the definition of “motor vehicle” (Marson, & Ferris, 2017).

- a. A mechanically propelled vehicle being an implement for cutting grass which is controlled by a pedestrian and is not capable of being used or adapted for any other purpose;
- b. Any other mechanically propelled vehicle controlled by a pedestrian which may be specified by regulations;
- c. An electrically assisted pedal cycle of such a class as may be prescribed by regulations.

C. Classifications of Vehicle

For the purpose of insurance, motor vehicles are classified into three broad categories: (Aleksandrowicz, 2020).

1. Private cars
2. Motor cycle and motor scooters
3. Commercial vehicles, which are further classified into:
 - i. Goods carrying vehicles
 - ii. Passenger carrying vehicles e.g. motorized rickshaws, Taxis, Buses.
 - iii. Miscellaneous Vehicles, e.g. Hearses, Ambulances, Cinema Film, Recording & Publicity vans, mobile dispensaries etc.

D. Types of motor insurance

I. Property Accident Aspect: In motor vehicle insurance, if the motor vehicle is insured, the owner will be indemnified for any loss or damage caused to it by accident. Motor vehicle insurance being a contract of indemnity the insured is entitled to indemnity only and that too, in the manner stated in the policy. Medical expenses up to a limit are also payable (Cahyandari, Awalluddin, Mariani, Sukono & Ghazali, 2020).

If the insured car suffers damage the insurer is entitled at his option to repair or replace the car or any part there of or pay the amount of the loss or damage in cash not

exceeding the sum insured or the value at the time of loss whichever is less. It is not often easy to replace parts or accessories especially if it is a foreign vehicle or an out dated and out-modeled vehicle. If the part is not locally available or is exorbitantly costly to obtain from abroad, the insurer often limits the liability to paying in cash the catalogue price issued by the manufacturer or his agent in India together with the cost of fitting such part (Lemaire, 2013).

ii. Personal Accident Aspect: Besides ensuring his personal safety under an ordinary policy, the extension clause indemnifies the assured for the injury caused to him whilst he is deriving a motor car not belonging to him or hired to him and also any person driving the insured car on the insured's order or with his permission (Hsu, Shiu, Chou, & Chen, 2015)

Further by paying extra premium he may get extra cover over and above the general cover under the standard policy like; (a) accident to his wife and other specified relatives or friends; (b) loss or damage due to earthquake, flood, etc. The policy indemnifies the insured to the use of the insured car. However, it is extended in two ways, namely; it extends to the insured not only when he is deriving his own insured car but also when he is driving a private motor car (but not motorcycle) not belonging to him.

The benefit of this extension is available only so long as he continues to be the owner of the insured car. It extends also to any driver, driving the vehicle on the insured's order or permission.

By the extension clause, the insurer purports to indemnify the authorized driver. The indemnity is however, subject to the terms, exceptions and conditions of the policy in so far as it they can be applied. (Europe, 2019).

Some of the usual conditions in a motor vehicle policy to make the insurer liable are;

1. The insured will maintain the vehicle in good state of repair and efficient condition;
2. He takes all reasonable steps and precautions to avoid accidents and to select component and sober drivers etc.
3. He takes all reasonable steps to safeguard the car from loss or damage.

E. Two Types of Policy Forms:

For all classes of vehicles, there are two types policy Forms in India:

Form “A”	To cover Act liability. It is also known as Act Only Policy
Form “B”	To cover Own Damage losses and Act Liability. It is also known as Comprehensive policy.

Form “A” is called “Standard Form for ‘A’ Policy for Act liability”. This form applies uniformly to all classes of Vehicles, Whether Private Cars, Commercial Vehicles, Motor Cycles or Motor Scooters, with suitable amendments in “Limitations as to Use”.

Form “B”, which provides wider cover as indicated above, varies with the class of vehicle covered. There are, therefore, Form “B” Policies for Private Cars, Commercial Vehicles, Motor Cycles/Scooters, etc. (Gürses, 2019).

F. Motor tariff

Motor insurance is governed by Motor Tariff came into operation from 2073 by Bima Samiti. It provides detailed terms and condition, premium rates as well as policy forms, proposal forms, endorsements for insurance of different classes of vehicles.

Own damage loss;

1. Risk Covered :

The Company will ‘indemnify’ the Insured against loss

- a. Fire, explosion, self-ignition or lightening; (Note: As regards “explosion” peril, both external and internal explosions are deemed to be covered.)
- b. Burglary, housebreaking or theft;
- c. Riot and strike;
- d. Earthquake (fire and shock damage);
- e. Flood, typhoon, hurricane, storm, tempest, inundation, cyclone, hailstorm, frost;
- f. Accidental external means;
- g. Malicious act;
- h. Terrorist activity;
- i. Landslide/rockslide;
- j. Whilst in transit by road, rail, inland waterway, lift, elevator or air (Correia, 2017).

b. Contract to indemnity

The contract is not to “pay” the loss to the insured, but to ‘indemnify’ him against his loss. Thus if parts are damaged in an accident and are replaced with new parts, the new price will not be paid, rather the new cost will be depreciated for age of the vehicle i.e., new cost reduced by actual depreciation; and the balance will be payable.

c. Loss or damage of accessories and extra fitting: It is covered only if the accessories are on the motor.

d. Deduction for Depreciation

Pathak (2021) alluded to the depreciation deducted for parts replaced following an accident as follows:

Table 6

List of Deduction for Depreciation

For all rubber/nylon plastic parts, tyres and tubes, batteries and airbags	50%
For all fiberglass components	30%
For all Parts made of glass	Nil
For all other parts as a percentage based on the age of the vehicle as follows:	
Age of the Vehicle	% of depreciation
Not exceeding 6 months	Nil
Between 6 months and 1 year	5%
Between 1 years and 2 year	10%
Between 2 years and 3 year	15%
Between 3 years and 4 year	25%
Between 4 years and 5 year	35%
Between 5 years and 10 year	40%
Over 10 years	50%

Towing charges

If the motor car is disabled as a result of damage covered by the policy, the insurers bear a reasonable cost of protecting the car and removing it to the nearest repairs, as also the reasonable cost of re-delivery to the insured (House & Hall,n.d.)

Exclusions under “own damage” Section

Satyal, R. R. (2010) stated the following exclusions in the insurance under the own damage section:

1. Consequential loss, Depreciation, Wear and Tear, mechanical or electrical Breakdown, Failures and Breakage; and
2. Damage to tyres unless the motor car is damaged at the same time when the liability of the insurer is limited to 50% of the cost of replacement;
3. Any accidental loss or damage suffered whilst the insured or any person driving with the knowledge and consent of the insured is under the influence of intoxicating or drugs.
4. Any accident, loss, damage or liability caused, sustained or incurred outside the geographical Area
5. Any claim out of any contractual liability.
6. Nuclear risks exclusion clause
7. Any accidental loss, damage or liability directly or indirectly, proximately or remotely arising from war, and kindred peril.
8. Deductible franchise (also known as excess)

2.5. Empirical Review

2.5.1. Empirical Review of International Studies

Awunyo-Vitor (2012) revealed that demand for comprehensive motor insurance is considerably influenced by earnings, cost of the vehicle, time period of usage of the vehicle, awareness of the premium and claim course of action through a study conducted regarding the urge for motor vehicle insurance in Ghana. Registered vehicles at Driver and Vehicle Licensing Authority located at Kumasi were taken as foundation for the collection of the data. The exploitation of logit model was done to evaluate the issues persuading the demand for motor vehicle insurance. On the other hand, the study discovered that there existed negative association between the costs of all-inclusive motor insurance and demand for such

insurance. In general, affluent people and individuals who utilized bank credit to pay for vehicle are inclined to obtain comprehensive motor insurance. Additionally claim dealings and action and the premium if alleged reasonable would perk up demand for comprehensive motor insurance. The study further advised the insurance companies to be directed for well-off car holders and person utilizing the credit from banks to buy their vehicles for promoting the motor insurance demand. On top of this, In addition insurance companies ought to lessen the necessary period to handle and settle claims. To end with, the study recommends policy formulators to place stress on crafting comprehensive insurance with alluring premium.

Dansu, Abass and Oyetayo (2018) examined the factors having an effect on preference of third party liability motor insurance amid faculty members and other staffs in Lagos state, Nigeria. The principal objective of study was to recognize prominent explanatory variables on the picking of third party liability motor insurance among Higher education, or post-secondary education in Lagos state. The study also recognized definite socio-cultural components, economic components and demographic components considerably impacting the selection of third party liability insurance. Primary data was employed by drawing on structured questionnaire taken from 300 academic employees from five tertiary institutions in Lagos. For the evaluation of influence, Factor analysis and hypothesis testing by means correlation analysis were utilized. Statistical Package for Social Sciences (SPSS), version 20 software was utilized for the data analysis purpose. The findings revealed that there exists considerable positive association subsisting between sizes of family, cost of insurance, quantity of vehicle possessed and marital standing and opting for third party liability motor insurance policy among academic staff of higher institutions in Lagos State. Likewise, the study exhibited that third party liability motor insurance is favored because of its economical nature and would possibly not obstruct the achievement of requirements and desires of any family members. The study suggested that protection of life and property except cost of motor insurance must be well thought-out when opting for selection of motor insurance policy and also advices to re-access and assess the existing laws and rules of motor insurance with an eye toward the escalation of scope to furnish for the life and properties of individuals and organization holding the insurance policy.

Alaka, Ajemunigbohun and Balogun (2021) analyzed the socio-economic and demographic elements exerting influence on the Insurance purchase actions among small to midsize

enterprise in Lagos, Nigeria. Through the embracement of cross-sectional survey research design, with intended population covering overall amount of listed small to midsize enterprise (SMEs) recorded in Lagos state, utilization of single-stage cluster sampling procedure was done for gathering of data. The total number of questionnaire circulated was 386 and the number of questionnaire to which people responded and was exploitable was 243. Multivariate regression was taken advantage of as the chief statistical method. The relevance of socioeconomic and demographic variables in the behavioral appraisal of insurance obtain in Lagos, Nigeria, is sustained by this study. The study spoke favorably of customizing insurance merchandise in an endearing and reasonably priced approach to small and medium sized enterprise proprietor in an attempt to hone their socio-economic and demographic risk outlook by the insurance companies. To a greater extent, the owners of the Small and Medium sized enterprise (SMEs) must seek to move their aspiration to handle the drive of risk-off to the insurance companies for sufficient commerce, economic and monetary protection.

Ali, Hadejia and Godara (2021) investigated the aspects having bearing on the motor insurance in India. The study was aimed to observe the factors impacting the motor vehicle insurance. Likewise, it also attempted to look at the effect of factors impacting the motor insurance consisting of four aspects automobile sales, auto claims incurred, road length and road accidents as independent variable on motor insurance premium which was taken as the dependent variable. It also intended to find out factors influencing growth of motor insurance. Being based on the secondary data gathered from Handbook on Indian Insurance Statistics and Centre dated 2005-2006 to 2017-2018, it employed multiple regression analysis for the investigation as the statistical instrument. The study discovered that statistically there is a significant association between the dependent variable consisting of motor insurance premium and independent variable consisting of automobile business, number of road accidents, and length of road and auto claims experienced. Pursuant to the result based on the study in order to effectively meet customer demands and requirements, management should center on location, enhancing branch network, and well-organized rendering of services, operating account effortless, interest rate, and efficient infrastructure configuration. In addition, to facilitate upholding and growth of their market share, businesses must utilize effective and efficient management techniques to analyze all identified factors and give them

the attention they deserve. These strategies should also be applied to create a center of attention and maintain prospective customers.

Dragos, Mare, Mureşan and Purcel (2023) provided evidence for positive association of Human Development Index (HDI), urbanization and car fleet on the insurance of motor vehicles despite the fact that there existed negative association between study of the inhabitants of a place and joblessness with demand for motor insurance. Overall, the results show forte in consideration of a set of supplementary control factors, but susceptibility in consideration to institutional attributes and the group of rising and east bloc nations. The supposition of spatial dissemination is maintained by approximation and the assessment of the direct and indirect consequences disclosed that the HDI is affected by or probably influenced by a global consequence besides the preponderance of the factors having an in-house bearing on the dependent variable. Through the application of spatial method of working of the consequences and crucial determining factor in relation to the demand for motor insurance in Europe, the study focused on examining Human Development Index (HDI) in combination with other significant socio-economic, demographic and institutional issue on the motor insurance market performed in 31 European countries. The data was taken on a yearly basis ranging from 2004 till 2019. Spatial panel econometrics procedure was used in order to explain the sample. Descriptively the chosen variables were assessed in primary phase of analysis and if essential, remedy as logarithmic transformation were also employed. In addition, the matching specific maps were also designed with the view to further visibly conjure the picture of the conduct of the variables and their dimensional elements.

Van Huyssteen and Rudansky-Kloppers (2024) looked at the aspects inducing the purchaser acquisition on the topic of Factors influencing consumers' purchase decisions regarding private motor vehicle insurance in South Africa. Self-administered questionnaire was collected from 200 respondents along with method of quantitative research. The study seeks to ascertain the definite issues that affect the individuals' judgment to pay for individual motor vehicle insurance in South Africa. Strategy incorporating three components of exploratory factor investigation, confirmatory factor investigation and logistic regression model construction was trailed to investigate and improve the procurement model of the buyer in anticipation of determination of model within acceptable limits. The justifiable prototype recognized definite interior and exterior factors particularly commercialization

actions consisting of individuals, process and cost of a policy, factors concerning to the sociocultural setting consisting of optimistic social rank and unconstructive reference family member ,communication origins consisting of social media attempts, buzz representative or delegates and tailored messages, psychological characteristics consisting of motivation and personality and population tally variables consisting of household earnings, maximum level of education and age. The exploitation of convenience and snowball sampling were consumed to choose the suitable respondents. LimeSurvey was utilized to sort out data amassed from January 2020 to November 2020 and the attained data were repossessed in an excel spreadsheet and were analyzed after IBM SPSS (Version 27).In order to investigate the fundamental variables T-test and Pearson correlation were utilized. The variables of the constructive sociocultural setting and unconstructive sociocultural setting presented that not anything disconnect these two groups from each other, consistent with the T-test of the "constructive sociocultural setting" and "unconstructive sociocultural setting" variables. These two variables and the dependent variable don't associate to each other.

In comparison to respondents without personal motor vehicle insurance, individuals with such insurance were more likely to report a larger control from marketing effort characteristics. This result is dependable with research suggestive of that consumers are budget conscious when it approaches to auto insurance premiums. In view of the fact that insurance companies are the ones who lay down policy and trade motor vehicle insurance products to customers and potential customers the study has recommended the companies to pay consideration to the fundamentals that have been acknowledged as influencing the market.

Table 7 Review of Empirical Studies in Nepal

Study	Main Objectives	Methodology	Major Findings
Awunyo-Vitor (2012)	The main purpose of the study was to find out Factors determining the all-inclusive motor insurance demand in Ghana.	Logit model was employed to appraise the aspects affecting the demand for comprehensive	The study found that factors such as income, the cost of the car, how long it is used, premium knowledge, and the course of a claim all had a significant impact on the

<p>Dansu, Abass and Oyetayo (2018)</p>	<p>The main goal of the research was to identify significant explanatory factors that influence higher education, or post-</p>	<p>motor vehicle insurance. Population consisted of the holders of private motor vehicle in year 2011 at the regional office of DVLA in Kumasi out of which 350 holders were chosen through simple random sampling. Efficiently structured questionnaires through interviews were done for the purpose of data collection.</p> <p>300 academic staff members from five tertiary institutions in Lagos</p>	<p>demand for comprehensive motor insurance. The study found that there was a negative correlation between the demands for and price of comprehensive auto insurance. Rich persons and those who paid for their cars using bank credit are more likely to have full coverage auto insurance. Furthermore, interactions and actions related to claims, as well as the price if it is thought to be appropriate might increase demand for comprehensive auto insurance.</p> <p>The outcomes demonstrated that there is a strong correlation between family sizes, insurance costs, the number of vehicles owned, marital</p>
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<p>Alaka, Ajemunigbohun and Balogun (2021)</p>	<p>secondary education, in Lagos State's decision to purchase third-party liability auto insurance. The study also identified specific sociocultural, economic, and demographic factors that have a significant influence on the choice of third-party liability insurance.</p> <p>The main purpose of the study was to appraise the socio-economic and demographic aspects impacting the purchase practices associated with the insurance in small and</p>	<p>completed a standardised questionnaire that was used to collect primary data. Factor analysis and hypothesis testing using correlation analysis were employed for the evaluation of influence. The software used for data analysis was the Statistical Package for Social Sciences (SPSS), version 20.</p> <p>Using a single-stage cluster sampling process, data was gathered using a cross-sectional survey research design with an</p>	<p>status, and the decision to purchase third-party liability auto insurance among academic staff in Lagos State's higher education institutions. The survey also showed that third-party liability auto insurance is preferred since it is affordable and might not interfere with any family member's ability to fulfil their goals and aspirations.</p> <p>The behavioural assessment of insurance gained in Lagos, Nigeria is supported by this study's proof of the significance of socioeconomic and demographic characteristics. In an effort to enhance their</p>
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	<p>midsize businesses in Lagos, Nigeria.</p>	<p>intended population that included all listed small- to mid-size enterprises (SMEs) registered in Lagos State. Out of the total number of questionnaires distributed, 386 were answered, and 243 of those responses might be used for further research. The primary statistical technique employed was multivariate regression.</p>	<p>socioeconomic and demographic risk assessment, the study backed the notion that insurance companies should develop insurance policies that are appealing and reasonably priced for small and medium-sized business owners. For small- and medium-sized business (SMEs) owners to guarantee sufficient financial, economic, and commercial protection, they must largely strive to transfer their desire to manage risk to insurance companies.</p>
<p>Ali, Hadejia and Godara (2021)</p>	<p>Observing the variables influencing auto insurance was the goal of the investigation. Similarly, an attempt</p>	<p>It used multiple regression analysis as the statistical instrument for the inquiry</p>	<p>According to the study, there is a statistically significant correlation between the independent variables—car business, number of accidents,</p>

	<p>was made to examine the effects of four elements that affect auto insurance: sales of automobiles, auto claims made, length of the road, and road accidents. These factors were considered independent variables, and the dependent variable was the motor insurance premium. Finding out the variables influencing the expansion of auto insurance was another goal.</p>	<p>because it was based on secondary data collected from the Handbook on Indian Insurance Statistics and Centre between 2005–2006 and 2017–2018.</p>	<p>length of time on the road, and number of auto claims—and the dependent variable, which is the motor insurance premium. According to the study's findings, management should prioritise location, improving branch networks, efficiently organised service delivery, interest rates, operating account ease of use, and effective infrastructure configuration in order to successfully satisfy client demands and requirements.</p>
<p>Dragos, Mare, Mureşan and Purcel (2023)</p>	<p>The study focused on examining the Human Development Index (HDI) in combination with other significant socio-economic, demographic, and institutional issues on the motor insurance market performed in 31 European</p>	<p>From 2004 to 2019, the data was collected annually. The sample was explained using the spatial panel econometrics approach. The selected variables were</p>	<p>While there was a negative correlation between joblessness and the demand for motor insurance, the study also showed a favourable relationship between the Human Development Index (HDI), urbanisation, and car fleet and motor vehicle insurance. Overall, the</p>

	<p>countries through the application of the spatial method of working of the consequences and crucial determining factor in relation to the demand for motor insurance in Europe.</p>	<p>evaluated descriptively during the first stage of the study, and if necessary, logarithmic transformation was also used as a correction. Furthermore, in order to more clearly visualise the behaviour of the variables and their dimensional components, matching particular maps were also created.</p>	<p>results indicate susceptibility when it comes to institutional characteristics and the group of emerging and former Soviet countries, but forte when it comes to a number of additional control factors. The assessment of the direct and indirect effects revealed that, in addition to the preponderance of the factors having an internal bearing on the dependent variable, the HDI is also likely influenced by a global consequence. This assessment upholds the approximation of spatial dissemination.</p>
<p>Van Huyssteen & Rudansky-Kloppers (2024)</p>	<p>The goal of the study is to identify the specific factors that influence people's decisions about how much to pay for private auto insurance in South Africa.</p>	<p>A self-administered questionnaire and a quantitative research approach were obtained from 200</p>	<p>The acceptable prototype identified specific internal and external factors, in particular, commercialization actions involving people, the procedure and expense of a policy, factors related to the sociocultural setting,</p>

		<p>respondents. To choose the appropriate respondents, convenience sampling and snowball sampling were used. Data collected from January 2020 to November 2020 were sorted using LimeSurvey.</p> <p>The collected data were stored in an Excel spreadsheet and were examined using IBM SPSS (Version 27). The T-test and Pearson correlation were used to look at the basic factors.</p> <p>According to the results of the T-test for</p>	<p>such as positive social rank and unfavourable reference family members, communication sources, such as social media attempts, buzz representatives or delegates and customised messages, psychological traits, such as motivation and personality, and population tally variables, such as household earnings, the highest level of education, and age.</p>
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		<p>the variables "constructive sociocultural setting" and "unconstructive sociocultural setting," nothing separates these two groups from one another about the constructive and unconstructive sociocultural settings.</p>	
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2.5.2. Empirical Review of Studies in Nepal

Ghimire (2020) in his study showed an investigation being focused on looking at assessment of conditions of the insurance services in Nepal. The study targeted on evaluating the contemporary circumstances of insurance services presented by various organizations in Nepal and take a look at prospects and challenges of the insurance sector. The study has also conferred in regards to issues pertaining to the regulation and development of this sector. Based on the examination of the accessible documents or data pertinent to a particular subject matter to assemble information, the study drew the inferences that business of insurance in Nepal has encountered sluggish expansion, inadequate scope and minimal penetration and concentration in the long term prior to 2001 which is progressively augmented subsequently. There is the supremacy of profit-oriented insurers in insurance business; sphere of influence of social insurance and social defense events is also mounting massively but deposit insurance and insurance services by noninsurance businesses is in petite level. The insurance

sector of Nepal is confronted with several significant regulatory aspects incorporating deficient corporate governance, depleted quality of service, amplification of counterfeit actions, penetration at a low level, range of insurance, insurance of property in a reduced amount than its accurate worth, misrepresentation of a product or service's appropriateness and force commerce or dealings and scarcity of skilled and qualified employees in the insurance sector. As an indispensable constituent of the financial structure, insurance sector offers stable and secured financial support for the capital market and banking business. The study advised the governing or legislative bodies and market players or partners to effectively join forces as a means to preserve financial balance, steadiness and continuous economic expansion along with making certain to safeguard the rights of customers.

Maharjan and Jha (2020) studied the role of insurance business in the economic development and expansion of Nepal undertaking orientation of two companies comprising Nepal life insurance Company limited as the representative of life insurance sector and Lumbini general life insurance company limited as the representative of non-life insurance sector. The data of 5 years from 2013/14 to 2017/18 was utilized and the study highlighted that collection of premium amount by the insurance businesses have assisted the growth of economy by means of transformation of the collected premium into funds or investment and by means of usage of these funds through venturing on equity and debentures, mutual funds, government bonds and other investments. The study ensued to escort GDP as the dependent variable in study which the researcher predicted to be affected by further independent variables as net premium revenue, make a payment for tax, contribution for employment and contribution for investing and additionally progressed on study to obtain the linear regression model. Four hypotheses were generated and tested. Founded fundamentally on the quantitative analysis and sustained by the qualitative analysis, the study utilized hybrid approach for the study. Available annual financial reports of NLIC and LGIC and Insurance Board were drawn out from official websites of the company. Likewise, usage of different released indexes and charts were also done. Utilization of SPSS as the statistical instrument and descriptive statistics comprising of frequency, central tendency and dispersion was done for the purpose of analysis of data. Likewise, regression and correlation of the variables were also calculated. The study demonstrated that the growth and development of business of insurance is exhilarating, demoralizing, and devastating. Through empirical research and cognitive

analysis, it was determined that the key factors for the growth and development of the insurance industry in Nepal were rising public awareness of the importance and benefits of insurance, government programmes and initiatives to promote insurance (such as tax subsidiary provision), the requirement for insurance for threatening and hazardous groups like immigrants and refugees, auto insurance against accidents, insurance for agriculture, and so forth. Additionally, a significant shift towards the use of digital apps and payment methods in the insurance industry has been observed as a crucial development up to this point.

Shakya (2021) assessed the model of assortment of premium of non-life insurance sector in Nepal. Intended with investigation of the connection between accumulation of premium and investment prototype of chosen non-life insurance companies, the population embraced the overall 20 non-life insurance companies and out of which Sagarmatha Insurance Company Limited and Shikhar Insurance Company Limited were taken as the sample through random sampling method. For the purpose of research, descriptive, analytical and comparative research design was employed. Ten years data ranging from 2009/2010 to 2018/2019 of the two companies was appraised which was amassed from the annual report of Sagarmatha Insurance Company Limited and Shikhar Insurance Company Limited. Statistical tools for the investigation of data consisted of mean, standard deviation, coefficient of variation and correlation. The findings revealed that motor and fire insurance was the most popular insurance among the non-life insurance sector. Likewise, it was disclosed that investment and premium collection tendency was in rising phase nevertheless swiftness is little by little. Elevated collection of premium has a domino effect of increased investment in diverse areas and increased investment upshots in maximum proceeds on invested capital.

Poudel and Shrestha (2023) concentrated on the issues influencing preference of comprehensive motor vehicle insurance in Nepal. The major rationale of the study was to inspect components that sway the car holder's selection of auto insurance. Congregated from 247 holders of motor insurance policy comprising privately owned vehicles, public transport and motorcycle as sample from total population of 1792211 as stated by the data obtained from Nepal Beema Authority. The precisely well-aimed population included all the holders of the motor insurance policy which were chosen as the sample through application of convenience sampling technique. Descriptive and quantitative research approach was

exploited in order to scrutinize how purchasers' preference of vehicle insurance is predisposed by the factors consisting of social, psychological, economic and vehicle. Through the application of physical and digital questionnaire distribution and collection of data, the accumulated data was analyzed using Statistical Package for Social Sciences (SPSS), version 26. Correlation, multiple regression, and crosstabs (chi-square) analysis was utilized for testing the generated hypothesis. The outcomes signified that comprehensive motor vehicle insurance was considerably affected by the aspects as marital position, earnings, age and value of the vehicle, insurance awareness, and claim history. It also noticed that psychological and economic aspects had a major bearing on this verdict. The study inferred that populace who possibly has enough money to shell out a large premium, were economically secure, hold advanced knowledge regarding the subject matter of insurance and encompassed an encouraging claim defrayal experience were the most important factors inducing their judgment to acquire comprehensive vehicle insurance. The study advised the insurance business to center the attention on edifying the community about the scope of insurance, dangers and benefits of possessing a comprehensive motor insurance, and at the same time advance the claim facility for the loss possessor.

Ghimire (2023) accessed the epigrammatic prelude regarding the insurance business in Nepal and its progression rate. This study centered on examining tendency of the overall premium income augmentation in Nepal throughout the time ranging from 2003 to 2020 and also attempted to relate the expansion with the expansion of economy to determine the causal association between them. Filter decomposition was done in order to weigh against the inclination with that the one drawn out with STL decomposition. The findings of the study revealed that even though the insurance business in Nepal is going up rapidly, even this considerable increase in total premium earnings is not synchronized with level of inflation. This entails that, when scrutinizing the nominal worth of entire premium earnings on reports, the real augmentation in demand for insurance would possibly not be as immense as formerly assumed. The growth and development of the economy in Nepal is what drives the insurance business's expansion. Even though the insurance business's expansion is shifting alongside by means of the economy, it is not propelling those alterations. Discrepancy in the narrow money supply's augmentation is an outcome of transposition in the insurance industry's

growth (M1). On the other hand, there are no transformations in the narrow money supply's growth.

2.6. Research Gap

Klingner and Boardman (2011) define research gap as the query or a dilemma that has remained unresolved or not responded by the research papers or investigations been carried out within the bounds of our research area or discipline. Every now and then, the existence of research gap can be seen while there is a notion or novel thought that does not encompass any studies at all. The aspects of the research work that have remain unexplored and investigation being carried out in inadequate way leads to the gap in the research. Absence or deficiency of the information pertinent to the study leads to the restriction in deriving the inference for a research question.

The conducted reviewed literature exhibited the determining factors influencing the demand for motor vehicle insurance in Nepal along with exposing the mainstream and ending result of the different independent variables on the dependent variable. The application of comparable settings and circumstances has been executed to the study to illustrate the ultimate dominant aspects influencing the motor insurance demand in Nepal.

A large number of researches have been conducted in international level, in countries like India, Nigeria, Ghana and in the western countries concerning the in the factors having some bearing on consumers' purchase decisions regarding personal motor vehicle insurance .A lot of researches in field of different related issues consisting of demographic variables like family income, maximum educational level, marital position, age of individuals, other variables as worth of the vehicle, age of the vehicle, awareness of the premium amount ,insurance acquaintance, claim process, marketing actions (people, process and price of policy),communication resources as social media attempts, buzz representatives, tailored messages) and so on.

The factors having an effect on the preference of all-inclusive motor insurance had been studied by Poudel and Shrestha (2023), situation investigation of insurance business in Nepal by Ghimire (2020), overview of insurance business by Panday (2019), performance and growth analysis of insurance business by Aryal n.d along with other studies regarding the general overview of insurance businesses and customer satisfaction by Pandey, Risal, Basnet,

and Sigdel (2024) and some other research have been conducted as well. However, majority of the studies have been done regarding the wide-ranging synopsis regarding the non-life insurance sector and a minority studies are conducted regarding the factors influencing demand for motor vehicle insurance in Nepal and even the conducted studies are carried out superficially just to the casual eye to the subject matter. Likewise, most of the studies in Nepalese are concentrated on factors influencing life insurance purchase decisions as Poudel and Shrestha (2023), Keyal and Bhattacharya n.d., Malla and Kautish n.d., Mishra (2023) Dahal, Ghimire & Joshi (2023) and Bista and Upadhyay (2023) and so on.

Most of the studies regarding demand for motor vehicle insurance are conducted with limited variables as marital status, income, age and value of the vehicle, insurance knowledge, and claim history. The assessment of multiple factors responsible for demand for motor vehicle insurance in Nepal is still limited. These studies are still insufficient to see the factors having a bearing on the motor vehicle insurance demand. So, this research is an addition to the research process and it aims for continuity in this topic by taking the foundation of previous researches conducted in this topic.

The Nepalese non-life insurance companies are unaware about the effective techniques and strategies in order to enhance motor vehicle insurance demand so as to improve their overall productivity and thereby their performance. This study thus aims to interlink the factors instigating demand and thereby increasing the motor insurance premium and consequently the profitability of the existing non-life insurance companies. This would help to intensify the customer satisfaction in the realm of motor vehicle insurance sector in Nepal.

CHAPTER III

RESEARCH METHODOLOGY

3.1. Introduction

A research method implies the approaches and configuration for collecting and analyzing the essential information. It is a course of action by which the answers for research questions are acquired by forming a plan, structure and strategy to investigate on the preferred topic. Thus, this part consists of the research design, sample size, data collection procedures, and data presentation and analysis tools. Qualitative, quantitative and mixed are the frequently employed approaches used for accomplishing the research (Lê and Schmid, 2022).

For undertaking the research based on analyzing factors influencing the motor vehicle insurance in Nepal, quantitative research method has been used. Owing to the study through the use of multiple statistical tools, quantitative research design is organized analysis and exploration of events, trends and occurrences by collecting the data in quantifiable form through the application of statistical, mathematical and analytical system (King, Bloomfield, Wu & Fischer, 2022). The quantitative research method calls attention to objective quantification and numerical, statistical examination and investigation of the data that has been gathered together by means of polls, questionnaires and surveys or by controlling preceding statistical data through the application of computational procedures. There is emergent accord that the quantitative research technique takes the part of critical task in the rationalization or validation of research (Pandey & Pandey, 2021).

3.2. Research Design

Research design is fundamentally the outline and structure for how the research would be organized. It is the delineation for setting up the research, fulfilling the research objective and obtaining the solution to our research questions. It develops a framework for required data category, area and time frame of the research, respondents of the questionnaire and sources from which it would be obtained, all variables and hypothesis that would be relevant to the study. Most prominently the approaches that would be employed for compilation, measurement and procedure of meticulously and analytically justifying, demonstrating,

illustrating, compressing, reviewing and appraising the collected data through the application of multiple statistical tools and techniques (Alharahsheh & Pius, 2020).

For the purpose of accomplishing the research objectives, descriptive research design and casual comparative design has been employed. This research is initiated with the examination of a dependent variable and is pursued by the demonstrative study of feasible relationships and its consequences. It portrays the circumstances in the usual settings and involves with the depictions of events cautiously through study of probable behavior, outlook and attributes. Individuals, events or conditions are portrayed as they subsist in the natural world. It inhibits controlling any of the variables instead only explains the samples and variables that have been chosen for the study by the researcher (Siedlecki, 2020).

3.3. Population and sampling procedure

The population of this study consists of all the non-life insurance companies in Nepal. At present, there are 14 no-life insurance companies in operation as per the Nepalese Insurance industry scenario. So, the populations consist of all 14 non-life insurance companies. Since, the study of population is inopportune to be studied; the study is restricted to selection of specific samples so that it is purposeful, convenient, provide factual and valid inferences, proportional and are the precisely the representation of the population. Probability and non-probability sampling are the two sampling methods in practice. One of the types of non-probability sampling convenient sampling technique has been employed in the study. A non-probability sampling technique called convenience sampling selects units for inclusion in the sample based on their ease of use and simplicity for the researcher. This may be the result of factors like proximity to the study site, availability at a given time, or willingness to engage in the study. Convenience sampling is widely employed when alternative sample approaches are difficult or impossible to apply because of time, money, or other constraints. The sample consists of the 3 non-life insurance companies namely: Shikhar Insurance Company Limited, Prabhu Insurance Limited and Siddhartha Premier Insurance Limited.

Table 8

List of Sample Size

Category	Population Size	Sample Size	Name of the Sample Companies
Non-Life Insurance Companies	14	3	i. Shikhar Insurance Company Limited
			ii. Prabhu Insurance Limited
			ii Siddhartha Premier Insurance Limited

3.4. Nature and sources of data collection

As the building block of any research, data are the texts, facts, numbers that are collected through various processes. Each research has its own data need and data sources. This study mainly based on secondary data provided by Nepal Insurance Authority, Department of Transport Management, Department of Road, Traffic Nepal Police, Financial Statistics, Annual Report, and Quarterly Reports. Other data provided by related companies' data are taken from the companies as well as their web sites, other related books and booklets.

For this study, secondary data are downloaded from websites of related companies and Nepal Insurance Authority, Department of Transport Management and Road Division Nepal.

3.5. Data Collection and Analysis

Numerous data are collected in the process of research. But most of the data are in raw form. So, these raw data needs to be validated, made more comprehensible, categorized and tabulated into a useful and understandable format for the rationale of assessment and interpretation. In order to present and analyze the collected data and representing the attained findings in form of tables, charts and figures, different statistical tools as Microsoft Excel would be employed. Descriptive statistics, one-way ANOVA, correlation and regression analysis would be employed in order to accomplish the determined research objectives and answer the research questions.

The data would be collected for six years ranging from 2015/16 to 2020/21 for all dependent and independent variables. Likewise, for the companies (Shikhar Insurance Company Limited,

Prabhu Insurance Limited and Siddhartha Premier Insurance Limited), 5 year data would be collected from 2075/76 to 2079/80.

The collected data from the processed data (secondary data) about premium collection, number of policies and total claim payments is tabulated first. Then, the financial tools and statistical tools are used. Graphs, charts, and diagrams are used in such a way that the findings could be presented and interpreted properly. This will help to draw out the clear and actual conclusion.

3.5.1 Financial Tools

To evaluate the financial position and performance of any firm growth rate is used as a key tool of financial analysis. “Financial analysis is the process of identifying the financial strength and weakness of the firm by properly establishing a relationship between the items of the balance sheet and profit and loss account.”

The growth rate from one period to another is calculated from the formula:

$$PR = \frac{(V_{Present} - V_{Past})}{V_{Past}} \times 100$$

Where:

PR = Percent Rate

$V_{Present}$ = Present or Future Value

V_{Past} = Past or Present Value

3.5.2. Descriptive Statistics

It portrays the fundamental attributes of the data collected for the purpose of study. It offers uncomplicated and clear synopsis of the chosen sample and the procedures. The data collected in the quantitative form are exhibited in convenient form through simplification of the substantial amount of collected data. The required data was collected through the application of Google form and afterwards their responses were hauled out through Microsoft Excel. Consequently, data acquired from questionnaire was coded and inserted into Excel for further investigation. The deduction was protracted through the investigated data that facilitated in offering solution to research questions.

The major significance of descriptive statistics is to offer essential information about the variables in the data bank along with drawing attention to the prospective association between those variables. In order to give explanation to the outcomes, different types of descriptive statistics as: Mean, median, frequency and percentage would be employed.

3.5.2.1. Mean

The most popularly and widely used measure of statistical analysis, Mean is also known as average and it is used to get one single value which describes or interprets the whole data. Arithmetic mean is the sum of all the observations divided by the number of observations. The arithmetic mean (AM) is denoted by \bar{x} . Arithmetic mean is computed as:

$$\bar{x} = \frac{\sum x}{n}$$

Where, \bar{x} = Mean

$\sum x$ = Sum of no. of observations

n = No. of observations

Correlation Analysis: It is a statistical technique to ascertain the degree of connection between two or more chosen parameters. Correlation analysis would be employed in order to determine the relationship between job stress and employee performance. The linear relationship between the two variables of correlation coefficient is always between -1 and +1. +1 indicates the strongest positive relationship possible and -1 indicates the negative relationship possible and coefficient of 0 signifies that there is no linear relationship between two variables.

It is computed using following formula:

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$$

Where,

r =correlation coefficient n =no. of observations

x and y are the variables

3.5.2.2. Multiple Regression Analysis: It is the statistical technique utilized in order to demonstrate the significant relationship between a dependent and several independent variables. The independent variables are also referred to as predictor variables and dependent variables are also referred to as criterion variable. An independent variable refers to the key, supposition or driving force that is varied with the purpose of appraising the effect of it on a dependent variable. Regression analysis is carried out in with a view to recognize the effect of job stress on the employee performance. The model for the regression equation could be denoted as:

$$Y = a + b_1x_1 + b_2x_2 + b_3x_3$$

Where,

Y = Dependent variable (Motor Insurance Premium)

X_1, X_2, X_3 and X_4 are the independent variables

X_1 = Motor vehicle sales

X_2 = Length of road

X_3 = Number of road accidents

A, b_1, b_2, b_3 are parameters, the value which are to be determined

3.5.2.2. One Way ANOVA Test: The one-way ANOVA equates among the concerned cluster and reveal if any of the means are statistically considerably distinctive from each other. Statistically significant difference between the two or more unrelated groups is determined through one-way Anova test (Kaltenbach & Kaltenbach, 2021). The one way ANOVA would be employed in order to find out if there is significant association between

the dependent variable (Motor insurance premium) and independent variable (motor vehicle sales, length of road and number of road accidents).

3.5.2.3. Time Series Analysis (Trend Analysis)

A series formed from a set of statistical data arranged in accordance with their time of occurrence is said to be a time series. It is one of the statistical tools, which indicates the improvement or decrement of the financial situation. It helps to determine the future values of the variables. The way from which the maximum information can be drawn from the figure collected is known as the analysis of time series.

$$Y = a + bX$$

Where,

Y = Trend value

a = Y-intercept

b = slope of the trend line of the amount of change in Y variable that is an associate with a change in 1 unit in the X variable

X = Time variables

The value of the constants a and b can be determined by solving the following two normal equations.

$$\sum Y = Na + b \sum X \dots\dots\dots (i)$$

$$\sum XY = a \sum X + b \sum X^2 \dots\dots\dots (ii)$$

Where, N = number of years

But for simplification, if the time variables are measured as a deviation from its mean I.e. mid-point is taken as the origin, the negative value in the first half of the series balance out the positive values in the second half so that $\sum X = 0$. The values of constants a and b can easily be determined by using the following formula.

$$a = \frac{\sum Y}{N}$$

$$b = \frac{\sum XY}{\sum X^2}$$

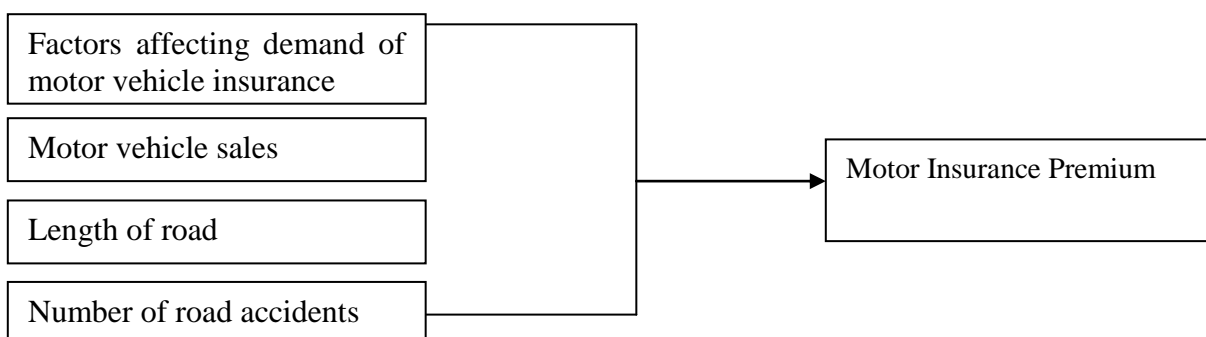
Diagrammatic and Graphical Representation

A picture speaks itself, no need to explain. It is also one of the tools that help in the interpretation of the data and present the findings of the study. The various bars, charts, and graphs are also used to present the data and data analysis in this study.

3.6. Research framework and segregation of variables

As an investigative mechanism to obtain a wide-ranging awareness of the occurrences and happenings, conceptual framework is primarily applied to elucidate the fundamental idea or notion or variable along with the association between the various visual forms.

The conceptual framework of the study shows the sources of factors contributing to the demand of motor vehicle insurance in Nepal. It seeks to establish relationship between determinants of motor vehicle insurance and motor insurance premium. Hypotheses are confirmed to define the correlation among the variables. The independent variables of the study are: Motor vehicle sales, length of road and number of road accidents. The dependent variable of the study is motor insurance premium.



Source: Ali, Hadejia & Godara (2021).

Figure 1 *Research framework*

3.6.1. Dependent and Independent Variables

The variables in the research signify the attributes that assume diverse values that can be an entity, occurrence, thought or notion, emotion or time phase or any other sort of grouping that is attempted to be measured.

Dependent variable: The variables which are influenced by the transformation or alteration in the existing independent variables and are contingent to other factors are referred to as dependent variable. It is the assessed or measured condition in the undertaken research in

order to determine how it acts in response to the independent variable. It is also referred to as the responding, outcome or criterion variable as it appraises how it takes action to the alterations in the independent variable. Motor insurance premium is the dependent variable of this research. The definite sum of money paid by the person undertaking the insurance policy on behalf of safeguarding themselves as well as of the vehicle is referred to as the motor insurance premium.

Independent variable: The variable that positions unaccompanied or by itself and is not altered or transformed by other variables intended to be measured is referred to as independent variable. It is the circumstance or state that is changed in the conducted experiment and has power over or is in command. The value is not dependent on and is not influenced by the condition or state of affairs of any other variable in the research due to which it is also referred to as the controlled explanatory or predictor variables. The independent variables of the study are: motor vehicle sales, length of road and number of road accidents.

Description of Variables

a. Motor Insurance Premium (Dependent Variable)

For the undertaking of intended research objective, motor insurance premium is taken as dependent variable. The charges compensated in order to shield a probably concealed destructive loss for instance robbery or car accident. It associates to the funds that are shelled out by an Individual or corporation for taking benefit of the insurance policy. The amount of premium is inclined by manifold aspects and alters from one payee to another. Contingent on the nature of policy, the insured is required to make payment of the premiums can each month, semi-annual or annual (Fatimah & Dharmani, 2022).

Independent Variables

a. Motor Vehicle sales:

Motor vehicle sales are the total number of unit sales of locally built automobiles, Sports Utility Vehicles, minivans, and weightless trucks that are sold. The corporations report the transactions on a quarterly basis or on the first business day of every month. The majority of motor vehicle transactions are passenger cars (sedans, Sports Utility Vehicles, etc.) and light

trucks (pick-up trucks, but not 18-wheelers); these transactions typically involve brand-new automobiles and trucks rather than used ones (Bintang, Arif & Mapparenta, 2022).

b. Length of road

The term "length of road" refers to the distance between the starting and finishing points. With the addition of rail, bus, road, and air transport, a network length measurement can be finalised. The length of a track, line, or route may be the focal point of the dimension, among a number of other distinct features.

c. Number of road accidents:

The mishaps or incidents involving at least one car on a public road that result in at least one person being hurt or killed is referred to as road accident. The length of the road, the number of users, the environment on the road, and the cars are all aspects that are related to the traffic structure and might cause a road accident. So, length of road plays a crucial role in determining motor insurance premium as higher the road length and higher the chances of motor vehicle accident and thereby higher chances of enhanced insurance (Ziakopoulos, Petraki, Kontaxi & Yannis, 2022).

CHAPTER IV

RESULTS AND DISCUSSIONS

This chapter offers an organized and logical presentation of data to display the obtained data by means of table, chart, and figure, diagram in order to contend with an assortment of concerns related with job stress, job stressors and impact of these stressor variables on performance of employees in Nepalese commercial banks. The result is based on the secondary data available from Nepal Insurance Authority, Department of Transport Management, Department of Road, Traffic Nepal Police, Financial Statistics, Annual Report, and Quarterly Reports. Other data provided by related companies' data are taken from the companies as well as their web sites, other related books and booklets. The data analysis is centered on four attributes consisting of motor vehicle sales, vehicle claims encountered, length of road and number of road accidents to analyze its influence on motor insurance premium. A descriptive investigation is an application of several statistical methods in order to investigate the research hypothesis. Application of several statistical, financial and mathematical tools is done in order to evaluate, explicate and interpret the systematized data. The outcomes of the study are conversed with reference to their correspondence to all of the intended significant research objectives of the study and accomplish the research goals. For the purpose of data analysis to facilitate clarification, Microsoft Excel has been utilized. The exploration of the data also consists of correlation as well as regression.

4.1. Descriptive Analysis

A form of analysis that assists to explain, demonstrate or recapitulate the data points in a constructive approach in a way that configurations might appear that satisfies all prerequisites of data is referred to as descriptive analysis. It offers a wrap up to the dissemination of data, aids to discover misprints or errors and outliers permits us to recognize the resemblances amongst variables and get the researcher prepared for carrying out additional statistical analysis. Dualistic elementary forms of measures constitute the Descriptive analysis. They are measures of central tendency and measures of variability. In order to explain the measurement of the collected data from the respondents, mean and standard deviation have been used.

4.1.1 Descriptive Analysis of Motor Insurance premium

Table 9

Descriptive Analysis of Motor Insurance premium

Years	Motor Insurance Premium (In crore)	Growth Percentage
2015/16	1501	
2016/17	1838.39	22.48
2017/18	2213.84	20.42
2018/19	2432.98	9.90
2019/20	2757.85	13.35
2020/21	2734	-0.86
Mean	2246.34	
Median	2323.41	
Standard Deviation	501.46	

Table 9 represents the descriptive statistics of motor insurance premium. The estimate of the mean is demonstrated to be 2246.34. Likewise, median represents the mid value of the specified data directory when positioned in order. The median was observed to be 2323.41. Furthermore, divergence of given statement from the mean on average is also presented by the Table 9. The standard deviation was observed to be 501.46. The percentage of growth in each year is also depicted by the figure which revealed that despite fall in the motor insurance premium in year 2020/21 by 0.86%; the highest growth was examined to be 22.48 % in the year 2016/17.

4.1.2. Descriptive Analysis of motor vehicle sales

Table 10

Descriptive Analysis of motor vehicle sales

Years	Motor vehicle sales	Growth Percentage
2015/16	23803	
2016/17	45667	91.85
2017/18	41354	-9.44
2018/19	41437	0.20
2019/20	29315	-29.25
2020/21	20635	-29.61
Mean	33701.83	
Median	35334.5	
Standard Deviation	10483.58	

The descriptive data of the sales of the motor vehicles in Nepal ranging from year fiscal year 2015/16 to 2020/21 are shown in Table 10. It is shown that the estimated mean is 33701.83. Similarly, the median indicates the middle value of the designated data directory when arranged in order. It was observed that the median was 35334.5. Additionally, Table 10 displays the provided statement's deviation from the average. It was observed that the standard deviation was 10483.58. The chart also shows the percentage growth for each year. It shows that although the sales of motor vehicle fell by 29.61% and 29.25% in 2020/21 and 2019/20; the biggest rise was found to be in the year 2016/17 with 91.85 %.

4.1.3. Descriptive analysis of Length of road

Table 11

Descriptive Analysis of length of road

Years	Length of road
2015/16	12898.2
2016/17	12898.2
2017/18	13447.62
2018/19	13447.62
2019/20	11178.92
2020/21	11178.92
Mean	12508.25
Median	12898.2
Standard Deviation	1058.60

Descriptive data on road length in Nepal from the fiscal years 2015–16 through 2020–21 is included in Table 11. A computed mean of 12508.25 is shown. In contrast, the median displays the selected data directory's middle value when ordered in that order. It was observed that the median was 12898.2 additionally; Table 11 displays the statement's deviation from the average. It was discovered that the standard deviation was 1058.60.

4.1.5. Descriptive Analysis of Number of Road accidents

Table 12

Descriptive Analysis of Number of road accidents

Years	Number of road accidents	Growth Percentage
2015/16	5530	
2016/17	6381	15.39
2017/18	8511	33.38
2018/19	10030	17.85
2019/20	10338	3.07
2020/21	10733	3.82
Mean	8587.17	
Median	9270.5	
Standard Deviation	2189.57	

Table 12 displays descriptive information about the number of traffic accidents in Nepal from the fiscal year 2015–16 to 2020–21. The estimated mean of 8587.17 is displayed. Comparably, the median shows the middle value of the chosen data directory when it is sorted in that order. It was noted that 9270.5 was the median. Furthermore, Table 12 shows the deviation of the given statement from the mean. The standard deviation was found to be 2189.57. The increase % for each year is also included on the chart. It demonstrates that regarding the number of traffic accidents, the largest increase—33.38 %—was recorded in the 2017–18 fiscal year and the lowest was 3.07% in the year 2019-20.

4.1.6. Descriptive Analysis Summary

Table 13 illustrates the descriptive analysis summary which is as follows:

Descriptive analysis of all the study variables taken as a whole is demonstrated by Table 12.

Table 13

Descriptive Analysis Summary

Years	Motor Insurance Premium (In crore)	Motor vehicle sales	Length of road	Number of road accidents
2015/16	1501	23803	12898.2	5530
2016/17	1838.39	45667	12898.2	6381
2017/18	2213.84	41354	13447.62	8511
2018/19	2432.98	41437	13447.62	10030
2019/20	2757.85	29315	11178.92	10338
2020/21	2734	20635	11178.92	10733
Mean	2246.34	33701.83	12508.25	8587.17
Median	2323.41	35334.5	12898.2	9270.5
Standard Deviation	501.46	10483.58	1058.60	2189.57

The independent variables comprises of motor vehicle sales, length of road and number of road accidents. The mean of motor insurance premium is 2246.34 ,motor vehicle sales is 33701.83,length of road is 12508.25 and number of road accidents is 8587.17.Motor vehicle sales denoted the highest mean of 33701.83 while lowest mean of 8587.17 was denoted by number of road accidents. It was observed that the median of motor insurance premium is 2323.41 motor vehicle sales is 35334.5, length of road is 12898.2 and number of road accidents is 9270.5.Highest median was denoted by motor vehicle sales while lowest was denoted by motor insurance premium. In the same way, standard deviation of motor insurance premium is 501.46, motor vehicle sales are 10483.58, length of road is 1058.60 and of number of road accidents are 2189.57. Motor vehicle sales indicated the highest standard deviation of 10483.58 implying signifies that the value is dispersed over a broad-spectrum and is distant from the mean value. The vehicle claims encountered indicated the lowest standard deviation of 501.46 implying the value is close to the mean of the group.

4.2. Correlation analysis

Coefficient of correlation is the mathematical method of measuring the degree of association between the two variables. The correlation helps to find out the strength of relationship along with the direction of their association between the variables. Connection between the dependent and independent variables chosen for the study are widely delineated through the application of Karl Pearson's coefficient of correlation (Pandey, 2020). As per this measure, the linear relationship between the two variables of correlation coefficient is always between -1 and +1. +1 indicates the strongest positive relationship possible and -1 indicates the negative relationship possible and coefficient of 0 signifies that there is no linear relationship between two variables.

4.2.1 Rule of Thumb for Size of a Correlation Coefficient interpretation

Taraldsen (2020) shows the following general rule of thumb that helps to interpret the size of a correlation coefficient. Table 13 illustrates the ranges of coefficient as well as the intensity of connection between the variables.

Table 14

Rule of Thumb for Size of a Correlation Coefficient interpretation

Ranges of coefficient	Strength of Association
0.90 to 1.00	Very Strong Correlation
0.70 to 0.89	Strong Correlation
0.40 to 0.69	Moderate Correlation
0.10 to 0.39	Weak Correlation
0.00 to 0.10	Negligible Correlation

4.2.2 Correlation Matrix

The correlation analysis of the dependent and independent variables is demonstrated by the correlation matrix in Table 14.

Table 15

Correlation Matrix

	<i>IP</i>	<i>VS</i>	<i>LR</i>	<i>RA</i>
<i>IP</i>	1			
<i>VS</i>	-0.187	1		
<i>LR</i>	-0.615	0.693	1	
<i>RA</i>	0.982	-0.185	-0.513	1

***.* Correlation is significant at the 0.05 level (1-tailed).

Note: *IP:* Motor Insurance Premium (Dependent Variable), *VS:* Motor Vehicle Sales, *LR:* Length of Road, *RA:* Number of Road Accidents)

Table 14 explores the Pearson's correlation coefficient between the dependent variable i.e. motor insurance premium and Independent variables (Motor vehicle sales, vehicle length of road and number of road accidents).The correlation between motor insurance premium and motor vehicle sales is -0.187 which denotes the negative weak correlation between motor insurance premium and motor vehicle sales. On the other hand, motor insurance premium and length of road revealed moderate negative correlation of -0.615 between them. In contrary, very strong positive correlation was exhibited number of road accidents and motor insurance premium with correlation value 0.982 falling within the coefficient ranges of 0.90 to 1.00. Significant moderate positive correlation was demonstrated between length of road and motor vehicle sales with correlation value of 0.693 standing between the coefficient ranges of 0.70 to 0.89.Number of road accidents and motor vehicle sales showed the weak negative correlation with value of -0.185.Conversely, moderate negative correlation is exhibited by number of road accidents and length of road with coefficient value of -0.513.

4.3. Regression analysis

Being one of the significant and widespread statistical instruments for data analysis, regression analysis is employed for assessment of the associations between a dependent variable and one or more multiple independent variable. The intake, supposition or driving force that is modified, transformed or altered with the intention to evaluate its influence on a dependent variable is known as independent variable (Freund, Wilson and Sa, 2006).Regression analysis assists to evaluate the intensity of connection between variables

and for simulation of the potential relationship lying between them. Meticulously, regression analysis rationalizes how the standard value of the dependent variable varies as a result of the transformation or alteration in the independent variable (Chatterjee and Hadi, 2013). The outcomes of regression analysis by means of the Microsoft Excel based on the primary data collected have been revealed in the tables.

Table 16

Model Summary

<i>Regression Statistics</i>	
Multiple R	0.9983
R Square	0.9966
Standard Error	46.1128
Observations	6

Note: Predictors :(Constant) *IP:* Motor Insurance Premium (*Dependent Variable*), *VS:* Motor Vehicle Sales, *LR:* Length of Road, *RA:* Number of Road Accidents)

Being a frequently employed measure of quantitative assessment for appraising, comparing and tracking performance for regression, coefficient of determination (R^2) is the proportion of discrepancy or deviation in the dependent variable particularly forecasted from the independent variable. It puts on view how proficiently the model of regression goes well with or suits the examined data and how much variance in the dependent variable is mutually elucidated by the independent variable. Higher value of R-square signifies that the model fits to our data more factually. It is employed to appraise the goodness of fit of the applied regression model in the study. The coefficient of determination can range from 0 to 1. The computed coefficient of determination $R^2 = 0.9966$, it signifies that 99.66 percent of the variation in dependent variable (motor insurance premium) is given explanation by the independent variables (VS, LR, and RA). Nevertheless, 0.34 percent i.e. $100\% - 99.66\%$ yet remains inexplicable in this research. In other words, 99.66 % the total variation in motor insurance premium has been explained by regression equation and remaining 0.34 percent is due to consequence of other factors. Further supplementary variables are significant in elucidating the dependent variable i.e. motor insurance premium that has remained unfolded in this research.

As a tailored adaptation of R-square accustomed for the considerable predictors in the model, the adjusted R-square method is exploited to ascertain how consistent the correlation is and how greatly it's impacted by the independent variables. It is predisposed to positively approximate the suit of the linear regression. It advances accuracy, reliability and steadiness with regards to the influence of other independent factors. As per the model summary, adjusted R-square 0.9966 which indicates 99.66% variation in motor insurance premium is described by independent variables taking into account accustomization of the degree of freedom. The summary also points to the standard error of the estimate of 46.1128 which demonstrates the fluctuation of the examined value of motor insurance premium from regression line is 46.1128 units.

Table 17

ANOVA

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	1253048	417682.5	196.4276182	0.005069421
Residual	2	4252.79	2126.394		
Total	5	1257300			

a. Dependent Variable: Motor Insurance Premium

b. Predictors :(Constant), *IP: Motor Insurance Premium (Dependent Variable)*, *VS: Motor Vehicle Sales*, *LR: Length of Road*, *RA: Number of Road Accidents*)

Predicated on table 17, (ANOVA), it demonstrated the p-value of 0.00506 that is less than p-value or alpha. For that reason, the paradigm is superior portrayal of connection between dependent and predictor variables. Statistical significance is usually defined as a p-value of less than 0.05. Additionally, the model exhibits that the F-statistic is significant at the value of 196.4276. Consequently, the independent variables (motor vehicle sales, length of road and number of road accidents have considerable variance with the dependent variable i.e. motor insurance premium.

Table 18

Coefficients

	Coefficients	Standard Error	t Stat	P-value
Intercept	2007.643	405.3733163	4.9526	0.04
VS	0.008	0.002838835	2.9823	0.10
LR	-0.140	0.032190169	-4.3351	0.05
RA	0.198	0.011415921	17.3302	0.00

Dependent variable: Motor Insurance Premium

Taking into consideration the independent variable comprising of, *Motor Insurance Premium (Dependent Variable)*, *VS: Motor Vehicle Sales*, *LR: Length of Road*, *RA: Number of Road Accidents*), the model for the study can be shown as:

$$IP = \alpha + \beta_1 VS + \beta_2 LR + \beta_3 RA + \epsilon_i$$

Derived from the coefficients, the regression equation for the motor insurance premium can be inscribed as:

$$IP = 2007.64 + 0.008VS - 0.140LR + 0.198RA + \epsilon_i$$

Owing to above Table 17, it is probable to ascertain the relationship between motor vehicle determinant variables and motor insurance premium of Nepalese non-life insurance companies. The first column in table 17, exhibits the predictor variables (constant, motor vehicle sales, length of road and number of road accidents. The first variable constant denotes the constant also implying the alpha. The table exhibited that length of road has negative influence on the motor insurance premium in Nepalese non-life insurance companies. On the other hand, the equation also illustrated the positive effect of motor vehicle sales and number of road accidents concerning motor insurance premium in Nepalese non-life insurance companies. As demonstrated by the table, the regression coefficient of motor vehicle sales is 0.008, length of road is -0.140 and number of road accidents is 0.198. Here, road length and number of road accidents are significant independent variables as the value is less than 0.05 i.e. ($p > 0.05$). Likewise, motor vehicle sales are significant at 10% significance level. The approximation notifies regarding the relationship between the independent variables and dependent variable. The coefficient (parameter approximation) for

motor vehicle sales is 0.008. The approximation imparts the amount of increase in motor insurance premium that would be estimated by a 1-unit increase in the predictor. The coefficient (parameter approximation) for motor vehicle sales is 0.008. So, for every unit increase in motor vehicle sales, a 0.008 increase in motor insurance premium is predicted deeming all other variables constant. By increasing the predictor by one unit, the approximation estimates the rise in motor insurance premium. For length of road, the coefficient (parameter approximation) is -0.140. In case of length of road, for every unit increase in length of road, there is a -0.140 unit decrease in the predicted motor insurance premium holding all other variables constant. The number of road accident coefficient, or parameter estimate, is 0.198. With a one unit rise in the predictor, the approximation provides the amount of increase in the motor insurance premium. For the number of road accident, 0.198 is the coefficient (parameter approximation). Determining all other factors to be constant, a rise in number of road accident of 0.198 is thus projected for each unit increase in motor vehicle insurance.

4.4. Hypothesis Testing

Descriptive analysis is carried out between the dependent variable .i.e. motor insurance premium and the independent variables comprising of motor vehicle sales, vehicle claims encountered, length of road and number of road accidents. For the purpose of assessing the formulated research hypothesis, correlation analysis was employed. Every part of statistical investigation executed to validate the hypothesis which clarifies the impact of determinants of demand of motor vehicle insurance on motor insurance premium is also integrated in this segment.

For the rationale of exploring the associations between the independent and dependent variables has been employed. In order to appraise formulated hypothesis as well as Pearson correlation test, the application of simple vicariate analysis has been done. Likewise, with the aspiration of evaluating the effect impact of motor vehicle sales, vehicle claims encountered, length of road and number of road accidents in motor insurance premium two hypotheses were formulated that is basically the anticipation or forecast that is intended to be analyzed by research. It was articulated in order to facilitate the clarification of relationship between the dependent and independent variables of the study.

In an effort to evaluate if there is acceptance or rejection of the null hypothesis, the application of P-value technique is done. The test of every formulated hypothesis has been done at the level $p < 0.05$ and $p < 0.10$ for motor vehicle sales. The null hypothesis is accepted in the condition when the value of p-value is greater than the significance level. However, an alternative hypothesis is accepted in the condition when the value of p-value is minor than the significance level.

Hypothesis Testing

H1: There is significant impact of motor vehicle sales on motor insurance premium.

The significance level of motor vehicle sales and motor insurance premium is 0.10. This points out that the alpha is significant at 10 % confidence level. The beta coefficient of motor vehicle sales and motor insurance premium has a significance value of 0.10 which is significant at 10% significance level. Therefore, H1 is accepted entailing that there is a significant relationship between motor vehicle sales and motor insurance premium.

H2: There is significant impact of length of road on motor insurance premium.

The significant value of the beta coefficient for the association between length of road and motor insurance premium is 0.05 which is less than or equal to the the p-value of 0.05. As a result, H2 is approved, suggesting that length of road and motor insurance premium are significantly correlated and there is significant relationship between them.

H3: There is significant impact of number of road accidents and motor insurance premium.

The significance level of motor vehicle sales and motor insurance premium is 0.003. The beta coefficient of motor vehicle sales and motor insurance premium has a significance value of 0.05 which is less than or equal to the the p-value of 0.05. Therefore, H3 is accepted entailing that there is a significant relationship between number of road accidents and motor insurance premium.

Consequently, it results in acceptance of all hypotheses H1, H2 and H3. Hence, it is inferred that there is significant impact of motor vehicle sales, length of road and number of road accidents on motor insurance premium.

4.5. Analysis of Individual Company

Three insurance companies are taken as sample due to various constraints. All together there are 14 non-life insurance companies operating in Nepal. But only three of them have been taken as sample. These three companies are the top five insurance companies in terms of premium collection in Nepal. Premium Collection, number of policies issued and total claim payments analysis of these companies are individually presented and analyzed below.

4.5.1. Shikhar Insurance Company Limited

Shikhar Insurance Company Ltd. (SICL) is an established General Insurance Company promoted by a young team of reputed Industrial and Business Houses involved in various fields like Aviation, Banking, Manufacturing, Trading, Travel Trade, and Media Houses etc. SICL is a company with a vision, geared up to face the every challenge that persists in the insurance industry. The challenges being developing policies as per the requirement of the client at an economical price, filling the void of the acute shortage of technical manpower in the insurance industry, introducing new products at par with international standards, creating capacities within the markets so that the outflow of the precious convertible currency can be minimized etc.

They believe that the relationship between the insured and the insurers is one of confidence and trust. Their goal is to set the standard for the insurance industry by providing quality service that exceeds customers' expectations. The company has the right combination of dedicated service-oriented professionals for which one can always trust for an excellent service.

Total Premium collection number of policies issued and claim settlement

Table 19

Total Premium collection and number of policies issued and claim settlement of Shikhar Insurance

Fiscal Year	No of Policies	Total Premium	Motor Growth Percentage	Total Claim paid
2075/76	39144	330,052,861.00	-	131,029,678.00
2076/77	74826	408,882,019.00	23.88%	188,690,789.00
2077/78	121842	592,565,736.00	44.92%	224,654,753.00
2078/79	180869	1,000,959,904.00	68.91%	396,752,543.00
2079/80	204629	1,459,857,665.00	45.84%	638,948,774.00
Total	621310	3,792,318,185.00		1,580,076,537.00

Source: Company's Annual Report

From the above table, the data from 2074/2075 to 2079/80 has been tabulated. The premium collection of Shikhar Insurance in the F.Y 2074/75 is 330,052,861.00 which have been increased to 408,882,019.00 in the year 2075/76. Similarly, it has increased to 592,565,736.00 in the year 2076/77 and 1,000,959,904.00 in 2077/78. It has maintained the increasing trend of premium collection in motor portfolio and collected the total premium of 1,459,857,665.00 in the year 2079/80.

In terms of number of policies issued each year, the total number of policies issued in 2074/75 is 39144. The number of policy issued has been increased to 74826 in the fiscal year 2075/76. 121842 is the number of policies issued in the year 2076/77. 180869 are the number of policies issued in the fiscal year 2077/78 and 204629 is the number of policy issued in motor insurance in 2078/79. The number of policies issued in motor insurance has been increased from fiscal year 2074/75 to 2078/79.

By analyzing the total premium collection in motor insurance it has increased from the year to year. In terms of growth rate, from 2074/75 to 2075/76 the growth rate in motor insurance premium collection is 23.88%. Similarly, the growth rate in 2076/77 is 44.92%, 2077/78 is 68.91% and 2078/79 is 45.84%. The premium collection has been increased in increasing order in each year. This shows that the demand for motor insurance has been increased.

Regarding claim payment in motor portfolio Shikhar Insurance has paid 131,029,678.00 in fiscal year 2074/75. In the year 2075/76 it has paid 188,690,789.00 in claims and in the year 2076/77 it has paid 224,654,753.00 claims. Similarly, 396,752,543.00 claim settlement was made in 2077/78 and 638,948,774.00 claim settlement was made in 2079/80. This shows that the Shikhar Insurance has made claim payments more each year.

4.5.2 Prabhu Insurance Limited

Prabhu Insurance Limited Is a non-life insurance company founded on 1996 by leading industrial and business houses of Nepal. It has Major shareholding of Prabhu Group, Karmachari Sanchaya Kosh (Employees Provident Fund), enterprises of Government of Nepal. It has paid-up Capital above 1 Billion by end of Fiscal year 2079/80.

The Company is led by Chairman Ms. Kusum Lama, a major shareholder and a very prominent figure in diverse areas of business such as remittance, banking & Finance.

A. Total Premium collection number of policies issued and claim settlement

Table 20

Total Premium collection and number of policies issued and claim settlement of Prabhu Insurance

Fiscal Year	No of Policies	Total Motor Premium	Growth Percentage	Total Claim paid
2074/75	46409	414,107,060.00	-	194,819,780.00
2075/76	54131	422,929,687.00	2.13%	260,885,499.00
2076/77	57486	453,830,282.00	7.30%	250,773,917.00
2077/78	55901	394,253,042.00	13.12%	278,108,213.00
2078/79	57651	457,353,713.00	16%	233,736,825.00
Total	271578	2,142,473,784.00		1,218,324,234.00

Source: Company's Annual Report

Motor Premium and Claim paid amount in '000'

Above table shows the total premium collected from the motor insurance and the number of policies issued in motor portfolio of Prabhu Insurance from the fiscal year 2074/75 to 2078/79. In the above table the total amount of claim paid over the five years period of time has been presented.

From the above table, the data from 2074/2075 to 2078/79 has been tabulated. The premium collection on motor insurance of Prabhu Insurance in the F.Y 2074/75 is 414,107,060.00 which have been increased to 422,929,687.00 in the year 2075/76. Similarly, it has increased to 453,830,282.00 in the year 2071/72 but decreased to 394,253,042.00 in 2072/73. It has again increased the premium collection in motor portfolio and collected the total premium of 457,353,713.00 in the year 2076/077.

In terms of number of policies issued each year, the total number of policies issued in 2074/75 is 46409. The number of policy issued has been increased to 54131 in the fiscal year 2075/76. 57486 is the number of policies issued in the year 2076/77. 55901 are the number of policies issued in the fiscal year 2077/78 and 57651 is the number of policy issued in motor insurance in 2078/79. The number of policies issued in motor insurance has been increased from fiscal year 2074/75 to 2076/77 but decreased ion 2077/78 and again increased in 2078/79.

By analyzing the total premium collection in motor insurance it has increased from the year to year remaining one year. In terms of growth rate, from 2074/75 to 2075/76 the growth rate in motor insurance premium collection is 2.13%. Similarly, the growth rate in 2076/77 is 7.30%, whereas the growth rate is negative in 2077/78 which is -13.12%. In 2078/79 it has again increased the premium and number of policies having growth rate of is 16%. The premium collection has been increased and number of policies issued also has been increased except one year. This shows that the demand for motor insurance has been increased.

Regarding claim payment in motor portfolio Prabhu Insurance has paid 194,819,780.00 claims in fiscal year 2074/75. In the year 2075/76 it has paid 260,885,499.00 in claims and in the year 2076/77 it has paid 250,773,917.00 claims. Similarly, 278,108,213.00 claim settlement was made in 2077/78 and 233,736,825.00 claim settlement was made in 2078/79. This shows that the Prabhu Insurance has made claim payments more each year.

4.5.3 Siddhartha Premier Insurance Ltd

Siddhartha Premier Insurance Limited (SPIL) is one of the renowned non-life (general) insurance companies in Nepal with strong presence in the form of 103 more Branches & Corporate at Siddhartha premier insurance Bhawan, Babarmahal, and Kathmandu.

Established in the year 2006, SIL is a financially sound and professionally managed organization. SIL has been promoted by leading Business houses, Industrial conglomerate &

Institutions. The company practices true customer-focused service by underwriting all types of risks in General and Health Insurance, often based on specific customer needs. SIL provides a complete range of insurance solutions from Property, Marine, Motor, Engineering, Miscellaneous, Aviation, Micro, Medi heath, Travelers Medi claim Policy, Miscellaneous Accident Risk, to cover for medium to large industries, commercial enterprises as well as Individuals. To achieve this end, it has employed qualified and experienced professionals. SIL is a customer-centric company, with a single-minded focus on service. Its priority is to build long term client relationships, with complete customer satisfaction as the most important non-negotiable objectives.

A. Total Premium collection number of policies issued and claim settlement

Table 21

Total Premium collection and number of policies issued and claim settlement of Siddhartha Insurance

Fiscal Year	No of Policies	Total Premium	Motor Growth Percentage	Total Claim paid
2074/75	45632	294,523,410.00	–	113,149,380.00
2075/76	56763	369,905,563.00	25.59%	177,038,814.00
2076/77	59121	407,942,222.00	10.28%	182,454,006.00
2077/78	61701	497,647,716.00	21.98%	240,441,813.00
2078/79	69558	705,043,270.00	41.67%	356,921,183.00
Total	292775	2,275,062,181.00		1,070,005,196.00

Source: Company's Annual Report

Above table shows the total premium collected from the motor insurance and the number of policies issued in motor portfolio of Siddhartha Insurance from Fiscal Year 2074/75 to 2078/79. In the above table the total amount of claim paid over the five years period of time has been presented.

From the above table, the data from 2074/2075 to 2078/79 has been tabulated. The premium collection of Siddhartha Premier Insurance in the F.Y 2074/75 is 294,523,410.00 which have been increased to 369,905,563.00 in the year 207576. Similarly, it has increased to 407,942,222.00 in the year 2076/77 and 497,647,716.00 in 2077/78. It has maintained the

increasing trend of premium collection in motor portfolio and collected the total premium of 705,043,270.00 in the year 2078/079.

In terms of number of policies issued each year, the total number of policies issued in 2074/75 is 45632. The number of policy issued has been increased to 56763 in the fiscal year 2075/76. 59121 is the number of policies issued in the year 2076/77. 61701 are the number of policies issued in the fiscal year 2077/78 and 69558 is the number of policy issued in motor insurance in 2078/79. The number of policies issued in motor insurance has been increased from fiscal year 2074/75 to 2078/79.

By analyzing the total premium collection in motor insurance it has increased from the year to year. In terms of growth rate, from 2074/75 to 2075/76 the growth rate in motor insurance premium collection is 25.59%. Similarly, the growth rate in 2076/77 is 10.28%, 2077/78 is 21.98% and 2078/79 is 41.67%. The premium collection has been increased in increasing order in each year. This shows that the demand for motor insurance has been increased.

Regarding claim payment in motor portfolio Siddhartha Premier Insurance has paid 113,149,380.00 in fiscal year 2074/75. In the year 2075/76 it has paid 177,038,814.00 in claims and in the year 2076/77 it has paid 182,454,006.00 claims. Similarly, 240,441,813.00 claim settlement was made in 2077/78 and 356,921,183.00 claim settlement was made in 2078/79. This shows that the Siddhartha Insurance has made claim payments more each year.

4.5.4 Average Motor Insurance Premium Collection in five years period of time

Table 22

Average Motor Premium Collection

Company	Average Motor Premium
Prabhu Insurance	428,494,756.80
Shikhar Insurance	758,463,637.00
Siddhartha Primer Insurance	455,012,436.20

In the above table the average premium collection in motor insurance of Shikhar Insurance is higher in comparison to Prabhu Insurance and Siddhartha Insurance. Shikhar Insurance average premium collection in motor insurance is 758,463,637.00. Similarly, Siddhartha Premier Insurance has average premium collection of 455,012,436.20 and Prabhu Insurance has average motor insurance premium collection of 428,494,756.80 in five year's period of

time. In total about 1 Arab 64 crore premium has been collected in motor Insurance yearly by these big three companies.

4.5.5 Number of Motor Insurance Policies Issued

Table 23

Total Motor Policies Issued

Fiscal Year	Prabhu Insurance	Shikhar Insurance	Siddhartha Insurance	Premier
	Demand/ No of Policies	Demand/ No of Policies	Demand/ No of Policies	
2074/75	46409	39144	45632	
2075/76	54131	74826	56763	
2076/77	57486	121842	59121	
2077/78	55901	180869	61701	
2078/79	57651	204629	69558	

In the above table the demand for motor insurance is denoted by number of policies issued each fiscal year. By analyzing slightly the demand for motor insurance or the number of policies issued each year has been increased.

In case of Prabhu Insurance the number of motor policies issued has been increased up to the fiscal year 2076/77. In the fiscal year 2077/78 the number of policies has been slightly decreased and again it has increased from the fiscal year 2078/79. In case of Shikhar Insurance, the number of policies issued or the demand for motor insurance has been increased each year in increasing rate. Similarly, the number of policies issued has been increased in case of Siddhartha Insurance too.

This shows that in overall the demand for motor insurance or the number of polices issued every year is increasing.

4.5.6 Total Claim Settlement of Motor Insurance

Table 24

Total Claim Settlement of Motor Insurance

Fiscal Year	Prabhu Insurance	Shikhar Insurance	Siddhartha Premier Insurance
2074/75	194,819,780.00	131,029,678.00	113,149,380.00
2075/76	260,885,499.00	188,690,789.00	177,038,814.00
2076/77	250,773,917.00	224,654,753.00	182,454,006.00
2077/78	278,108,213.00	396,752,543.00	240,441,813.00
2078/79	233,736,825.00	638,948,774.00	356,921,183.00

In the above table the total claim settlement of each Insurance company has been increased each fiscal year. In case of Prabhu Insurance up to 2074/75, it has been increased but in the 2078/79 it has been slightly decreased. Similarly, in case of Shikhar Insurance and Siddhartha Premier Insurance the claim settlement has been increased in each fiscal year.

4.6. Correlation Analysis

4.6.1 Correlation between Total No of policies issued and total premium collection

The insurance premium has played a very important role in the performance of insurance companies. Correlation between total numbers of polices issued and total premium collection measures the degree of relationship between these two variables. In this analysis, total no of policies is the independent variable (X) and total premium collection are dependent variable (Y).

Table 25

Correlation between Total No of Policies and Total Premium Collection and Loan & Advances

Correlation between No of policies issued and Total Premium collection		
Name of Insurance Companies	Evaluation Criteria	
	R	R ²
Prabhu Insurance Limited	0.475	0.226
Shikhar Insurance Limited	0.950	0.902
Siddhartha Premier Insurance	0.928	0.862

Source: Calculation from Excel

From the above table, it is found that the coefficient of correlation between total number of policies issued and total premium collection is 0.475, 0.950 and 0.928. It is shown that both

have a positive relationship between these two variables. It refers that total no of policies issued and total premium collection of these three insurance companies move together very closely. Moreover, the coefficient of determination of Prabhu is 0.226. It means 22.6 percent of the variation in premium collection has been explained by number of policies issued. Similarly, the value of the coefficient of determination of Shikhar is 0.902. It refers that 90.2 percent variance in premium collection has been explained by number of policies issued. And the value of the coefficient of determination of Siddhartha is 0.862. It refers that 96.2 percent variance in premium collection has been explained by number of policies issued. In other words, there is a significant relationship between No of Policies issued and total premium collection.

4.8. Discussion

The study entitled factors influencing demand for motor vehicle insurance in Nepal was conducted with the intent to ascertain the primary determinants that influence the demand of motor vehicle insurance in Nepal predominantly being centered on non-life insurance companies namely: Shikhar Insurance Company Limited, Prabhu Insurance Limited and Siddhartha Premier Insurance Limited. With the sample size of 3 out of non-insurance companies out of 14 to epitomize the all-inclusive population of non-life insurance companies in Nepal, the study employed descriptive analysis and hypothesis testing.

Descriptive statistics was calculated under which mean, standard deviation and present rate (growth rate) was calculated. Mean used as a measure of central tendency is a common tool for determining the usual or average value within a set of data. The measure of how distributed the data is with respect to the mean is called a standard deviation. Growth rates are a simple way to quantify the annual change in a variable as a percentage. A greater mean indicates that, generally speaking, the data points are larger or more significant than those with a lower mean.

Motor Insurance Premium indicated the lowest mean of 2246.34 and motor vehicle sales indicated the greatest mean of 33701.83. The data indicates that the highest median was observed in motor vehicle sales with value of 35334.5 and lowest median was observed in motor insurance premium with value of 2323.41. Sales of motor vehicles had the biggest standard deviation (10483.58), indicating that the value is spread out over a wide range and

not close to the mean. The motor insurance premium had the lowest standard deviation (501.46), suggesting that the value is fairly near to the group mean.

Motor insurance premiums and car sales have a weakly negative link ($r = -0.187$), according to the correlation coefficient. In contrast, there was a somewhat negative correlation (-0.615) discovered between the length of the road and the motor insurance premium. However, the correlation between the number of traffic accidents and the motor insurance premium was very strong, measuring 0.982 . The correlation value of 0.693 between the length of the road and motor vehicle sales indicated a substantial moderate positive association. Sales of motor vehicles and the number of traffic accidents had a weakly negative association, with a value of -0.185 . On the other hand, the length of the road and the number of traffic accidents show a moderately negative link (coefficient value: -0.513). Sales of motor vehicles and the number of traffic accidents had a weakly negative association, with a value of -0.185 . On the other hand, the length of the road and the number of traffic accidents show a moderately negative link (coefficient value: -0.513).

Attributing to the model summary, the value of R-square is 0.9966 i.e. 99.66% variation in the motor insurance premium is explained by independent variables: Motor Insurance Premium (Dependent Variable), VS: Motor Vehicle Sales, LR: Length of Road, RA: Number of Road Accidents) and remaining 0.34 percent is due to consequence of other factors. Further supplementary variables are significant in clarifying the dependent variable i.e. motor insurance premium that has remained to be investigated, solved or explained.

Centered on table 28, (ANOVA), the p-value is 0.0051 which is less than alpha. For that reason, the model is reliable explanation of connection between the dependent and predictor variables. Moreover, the F-statistic is significant at the value of 196.427 . Consequently, the independent variables of the study comprising of motor vehicle sales, length of road and number of road accidents. The regression equation for the study can be stated as:

$$IP = 2007.64 + 0.008VS - 0.140LR + 0.198RA + i$$

The regression coefficient of motor vehicle sales is 0.008 , length of road is -0.140 and number of road accidents is 0.198 . Here, length of road and number of road accidents are significant independent variables as the value is less than 0.05 i.e. ($p < 0.05$). Likewise, motor vehicle sales is also significant at 10% confidence level with p value of 0.10 . The approximation conveys that the amount of increase in length of road, number of road

accidents and motor vehicle sales that would be estimated by a 1-unit increase in the value of predictor. So, it gives explanation that 1-unit increase in independent variables (motor vehicle sales, length of road and number of road accidents) will result in 0.008,-0.140 and 0.198 unit increase in motor insurance premium respectively implying the direct proportion of independent variables and motor insurance premium and vice versa holding all other variables constant.

Hypothesis testing was conducted with the application of three statements formulated for the purpose of study. The study demonstrated that there was the rejection of null hypothesis and acceptance of H1, H2 AND H3. The p-value of motor vehicle sales was 0.10 which is significant at 10 % confidence level. Likewise, p-value of road length and number of road accidents was 0.05 and 0.003 respectively which were less than p-value of 0.05. The research outcome demonstrated that this implies that there is significant impact of motor vehicle sales, length of road and number of road accidents on motor insurance premiums. Accordingly, variations in the dependent variable Y (motor insurance premium) can be predicted and ascertained using the values of the explanatory vehicle characteristics, which include motor vehicle sales, the length of the road, and the quantity of traffic accidents. It is associated to the enhanced profitability, productivity and output thereby enhancing overall performance of non-life insurance companies.

This result is corroborated by research by Ali, Hadejia, and Godar (2021) which found a statistically significant correlation between the explanatory vehicles: automobile sales, number of road accidents on the road, length of the road and auto claims and explained variable motor insurance premium. Awunyo- Vitor (2012) however, found that the desire for comprehensive auto insurance is highly impacted by factors such as income, car age and value, premium perception, and claim handling. However, research also demonstrated that the cost of comprehensive auto insurance had a detrimental effect on demand. Furthermore, if claim processes and premiums are thought to be satisfactory, demand for full-coverage auto insurance will increase. Similarly, Ajemunighohun and Oreshile (2014) appraised the significant effect of motor vehicle drivers influence of drivers' risk outlook on risk incidence and consequently, explored the significant connection between motorists' risk outlook and demand for motor vehicle insurance. Some major major findings that can be drawn from the sampled 3 companies are as follows.

On the basis of preceding chapters and data presentation and analysis some major findings can be drawn. The major findings of thesis study are summarized below:

- From sample study of three insurance companies, motor insurance premium of Shikhar has the highest whereas Prabhu Insurance has the lowest. Similarly, the highest number of policies issued in motor insurance is by Shikhar Insurance and lowest is by Prabhu Insurance. Lastly, the total claim settlement is made most by Shikhar Insurance and least by Siddhartha Premier Insurance.
- Shikhar Insurance has managed to increase its number of policies and increase its premium collection dramatically in five years period of time. The growth percentage was 23.88% in 2075/76 which eventually managed to increase by 45.84% in 2078/79. The demand has been increasing in each year and in the fiscal year 2077/78 the demand for motor insurance was maximum i.e 68.91%.
- Prabhu Insurance had small amount of growth rate in previous fiscal year but in the fiscal year 2077/78 it had negative results. Its growth decreased by 13.12%. Again in the fiscal year 2078/79 it has managed to increase and achieve the growth rate of 16%. This shows that the average demand for motor insurance is increasing each year though in one year it had negative results. The maximum demand for motor insurance was in the fiscal year 2078/79.
- Siddhartha Premier Insurance has increased and achieved the growth rate each year. In the fiscal year 2075/76 it had growth rate of 25.59% in premium collection whereas the growth rate was only 10.28% in 2076/77. Then it achieved 21.98% and in the fiscal year 2077/78 and the growth rate was 41.67% in the fiscal year 2078/79. This shows that the demand for motor insurance is being increasing each year. And, in the fiscal year 2078/79 the demand for motor insurance was maximum.
- In an average the total demands for motor insurance each year is about 1 Arba 64 crores. This shows that people are aware of the motor insurance and are interested to do motor insurance. Shikhar Insurance collects more motor insurance premium than other two sample companies in an average.
- In total Rs 1,580,076,537.00 claim settlement has been made by the Shikhar Insurance, which is the highest claim settlement among three insurance companies.

Rs 1,218,324,234.00 claim is settled by Prabhu Insurance in five years period of time and Rs 1,070,005,196.00 claim is paid by Siddhartha Premier Insurance.

- The Total premium, total number of policy issued and total claim payment each year is increased in each fiscal year. This shows that people is buying more insurance policies which denotes that the demand for motor insurance has increased.
- The Trend Analysis of three insurance companies shows that Siddhartha premier insurance has mobilized properly its motor insurance policies. It shows that Prabhu Insurance, Shikhar Insurance and Siddhartha premier Insurance shows increasing trend continuously. Shikhar Insurance is the higher No of policies issuer among the insurance companies which has increasing trends of no of policies issued during the study period.
- The demand has been increased because of people's awareness regarding motor insurance has been increased. The factors such as security of life, security of vehicle, Risk free, claim purpose are the motivating factors for the increase in demand for motor insurance. Similarly, since government has made mandatory rules in case of Third Party compulsory, so the demand has been increasing as number of vehicles has been increasing.
- As road traffic, motor vehicle and risks in motor vehicle is increasing every day, people are being aware and the promotion and marketing of insurance companies has led to the increase in motor vehicle insurance.
- Insurance market in Nepal is growing day by day. At present, people are more conscious about insurance and its importance. Earlier, life insurance was the only insurance policy that people would adopt. However, these days both Life insurance and Non-Life insurance are becoming familiar in Nepal.
- Every fiscal year the revenue generated from Insurance market is getting higher and reports from Insurance Board are very encouraging.
- In Nepal there was a massive earthquake in the fiscal Year 2071/72. It had led to the destruction of thousands of lives and number of houses. It had caused a great loss in the history of Nepal. And in the history of insurance sector too, it caused huge loss in their balance sheet because it had to pay more claims. So, because of this also people were quite conscious from that time. They feel that whoever was insured got

somehow financial assistance from the insurance companies. Those, who had not done insurance, had no options other than regretting. Thus, after that it has found that number of people buying motor insurance policies and demand for motor insurance had been increased.

Therefore, considering all of the facts it is observed that there is significant influence of the specific internal and external factors, psychological factors as well as the demographic factors that influence the demand for motor vehicle insurance either in positive or negative way. There is a significant interrelationship between chosen constructs as motor vehicle sales, vehicle claims encountered, length of road and number of road accidents on motor insurance premiums. The chosen constructs are both positively and negatively related and have a greater impact on demand for motor vehicle insurance. All four variables showed negative correlation in relation to the motor insurance premium.

CHAPTER V

SUMMARY AND CONCLUSIONS

5.1. Conclusion

Through the observation and evaluation of the literature from multiple sources with the view to investigate the data and extensive comprehension of the research concern, this study aimed to explore the factors influencing demand for motor vehicle insurance in Nepal. Data were collected through secondary sources obtained from data provided by Nepal Insurance Authority, Department of Transport Management, Department of Road, Traffic Nepal Police, Financial Statistics, Annual Report of the selected companies, and Quarterly Reports. Other data provided by related companies' data are taken from the companies as well as their web sites, other related books and booklets. Different tools of information like magazine, newspaper, radio, television and websites are the main sources of information and data. Abundant aspects such as motor vehicle sales, vehicle claims encountered, length of road and number of road accidents were acknowledged through the review of multiple literature with the aim of analyzing the influence on motor vehicle insurance demand.

Few Year ago people take insurance just for formalities. They deposit as a premium few amount whatever he can save. They didn't believed in insurance company because in Nepal corporate business in not develop. But slowly corporate business is going to establish and people consciousness is growing. People save as much as amount to buy insurance policy and make secure big amount of securities. In Nonlife insurance also same because of huge economic activates. Business man always wants to feel secure in his business.

However, from the secondary data we have collected from the major player of the insurance industry in Nepal it made clear that people are more positive about motor insurance and its impact in their day to day life at recent time. Government and private sectors' reports are showing the increasing number of participations in motor insurance marketing every fiscal year.

This study shows that every year the insured people in motor insurance are increasing. Especially, in the fiscal year 2078/79 significant difference was seen from 2075/76 where more than 10 Lakhs new people were insured. Due to rapid advancement in information sectors, people's awareness towards insurance has been a key factor in this positive change.

In the present context, people are being more knowledgeable about the importance and the benefits that insurance provides in their personal and professional life. These days insurance are not only the means of saving the money but it has been more like securing the future from uncertainty. These encouraging developments in insurance sector have opened a door for fierce competition in insurance industry. Insurance companies are looking for innovative products and services to gain a competitive edge.

The demand for motor insurance has been increased because of people's awareness regarding motor insurance has been increased. The factors such as security of life, security of vehicle, Risk free, claim purpose are the motivating factors for the increase in demand for motor insurance. Similarly, since government has made mandatory rules in case of Third Party compulsory, the demand has been increasing as number of vehicles has been increasing.

Security of Life is the first factor that motivates people for buying motor insurance of their vehicles. In motor insurance it covers the death and accidental injury of passengers, drivers and third parties/persons outside their vehicles too. So it creates a kind of security of their life and motivates people to insure it.

The second point is security of vehicle. If the motor is insured then there is feeling that motor is being secured. If some accidental damage occurs to the vehicle then those accidental damages will be covered by insurance companies.

Insuring vehicles means being risk free so people want to transfer their risk to the insurance companies in exchange of premium and feel free to drive. Because in case something happens then there is insurance company to compensate their risks.

Another point is that in Nepal Third Party insurance coverage is compulsory in Nepal for every type of vehicles. So, people are compelled to insure their vehicles. In order to register our vehicle we need insurance paper so for that compulsory purpose people need to do insurance. And every year number of vehicles is being increased so it eventually led to the increase in demand for motor insurance.

And last but important point is the benefits that arise from claim payment. If the vehicle got accident then it may cause high loss of life and property. And if it is insured then it is compensated by insurance companies so that there security of peoples life and property. So, people need insuring their motor vehicles.

A synopsis of the major findings of the study that has been exhibited as per the objectives of the study has been offered by this section. It sets sights on explanation of the outcomes acquired from the data analysis and the conclusions are derived from the findings and implications and recommendations would be offered to enhance the demand for motor vehicle insurance thereby augment the sales and profitability of the companies. The answers to the preset objectives have been offered and it talks about the factors influencing demand for motor vehicle insurance in the Nepalese non-life insurance companies arena. As a final point, the chapter is finished off with demonstrating the opportunity of the potential research in this area. Anchored in empirical findings, it is concluded that since legislators and lawmakers are the ones that suggest and advertise motor vehicle insurance products to consumers and potential clients, it is advised that insurance businesses are aware of the recognised factors that impact the market. Accidents are an unintentional phenomenon and it is even more prevalent in Nepalese circumstances because of perilous driving situation, as well as guardrail deficiency, unsighted curves, and miniature passages. In addition to this, there are insufficient safety attributes in vehicles and motorcycles, as well as inadequate vehicle upholding. This can definitely be prospects for insurance companies to advertise their products and allure as much customers as they can by their benefits. It is very significant that insurance companies should develop attractive schemes to fulfill motor insurance need of every type of customers.

5.2. Summary

Insurance sector being the catalyst of economic development holds significant standpoint and operates as a driving force for development of nation as well as overall activities of trade, industry and commerce after the banking sector. Being a universal constituent of today's world of globalization, privatization and contemporary technological insurgence that has completely changed the dynamics of operation of the insurance sector and forced it to understand the environmental dynamism, work under resource constraints, meet competition and develop attractive schemes to cater the need of every class of individuals in society.

This chapter envelops the consideration of the findings engendered from the study along with drawing attention to the findings in comprehensive manner. With the main rationale of

investigating the factors influencing the demand for motor vehicle insurance in Nepal, it focused on three determinants comprising of motor vehicle sales, length of road and number of road accidents that was categorized as independent variables and it was tested with the dependent variable i.e. motor insurance premium. An assortment of several forms of statistical approaches as descriptive analysis, reliability analysis, one-way ANOVA, correlation analysis and regression analysis were accomplished in order to appraise the factors influencing demand for motor vehicle insurance in Nepal. Microsoft Excel software was employed for the data analysis purpose and was portrayed in tabular and graphical configuration.

The selection of comprehensive automobile insurance was found to be extremely impacted by social, psychological, economic, and vehicle-related aspects. Negative correlations were found between independent variable (motor vehicle sales and length of road) and the dependent variable (motor insurance premium) via correlation analysis except for the positive relationship between number of road accidents and motor insurance premium. Positive relationship was revealed between length of road and motor vehicle sales and negative relationship was disclosed between number of road accidents and motor vehicle sales.

It was observed that the more the pathlength is covered by the vehicle; the more progress the demand for the motor vehicle insurance. The accidents also had the positive effect due to which people obtained the motor vehicle insurance in order to provide protection against unforeseen circumstances.

The demand for motor insurance has been increased because of people's awareness regarding motor insurance has been increased. The factors such as security of life, security of vehicle, Risk free, claim purpose are the motivating factors for the increase in demand for motor insurance. The demand has been increasing as number of vehicles has been increasing in today's scenario since government has made mandatory rules in case of Third Party compulsory.

Through the study, it was observed that there is a considerable influence of the determinants in the motor vehicle insurance in Nepal. Some variables were found to have exhibited an impenetrable and solid bearing on the supplementary variables. The outcomes of the study indicated that motor vehicle sales, length of road and number of road accidents have a key

influence on the motor vehicle insurance demand. For that reason, being knowledgeable and responsive in discerning the exact origin of demand enhances the level of performance of the insurance sector. The findings of the study revealed that preponderance of the insurance sectors deemed number of accidents and length of road as the crucial foundation of vehicle insurance demand. This has coerced the organizations to incorporate novel concepts of motor vehicle insurance and make their claim processing hassle free and fast.

5.3. Implications

Though different forms of challenges are confronted by the insurance sectors demand for motor vehicle insurance is one of the impulsive and affecting threats of the insurance companies. This study aims to interlink the determinants of motor vehicle insurance and motor insurance premium thereby making it constructive for field of human resource management in organizations and comprehending relationship between factors of motor vehicle insurance and motor insurance premium in the context of scenario of Nepalese arena. HR professionals can analyze the current status of demand for motor vehicle insurance and its effect on the performance of non-life insurance companies and develop insights that would help to enhance the demand for comprehensive motor vehicle insurance rather than merely third-party insurance. It would also be helpful for underwriting staff as it would increase the premium collection of non-life insurance companies. It also offers apparent and comprehensible imminent to the non-life insurance companies to become aware of the desires and requirements of the customers opting for motor vehicle insurance. Top-level employees are also aided with the decision making regarding reducing factors enhancing the demand and advancing their business by dealing with such determinants. The findings will aid as groundwork for employees operational in insurance companies to achieve superior insights of key demand instigating reasons, their relations, influence of the determinants and growth of motor insurance premium. Likewise, the study will be of immense connotation as the management of the insurance companies can envisage the factors enhancing as well as hindering the demand which is capable of eventually make possibility for undertaking suitable approaches and policy to enhance the overall output and efficiency of non-life insurance sector.

Thereby, with the purpose of subsisting in the globalized competitive world in an unceasing manner, it is essential for non-life insurance companies to develop effective strategies for enhancing demand. As a final point, managerial implication of this research will aid the managers' to appraise their strategies related to the motor vehicle insurance demand advancing their strategies to countenance for future demands of the customers. The research findings might be useful for Human Resource Department (HRM) responsible for training, development and motivating employee in the organization to work together for enhancing the vehicle insurance necessity.

Other non-life insurance businesses, trade and business firm's employees would also be substantially facilitated by this study for knowing the circumstances that contribute to the augmentation of demand for motor vehicle insurance.

Additionally, this research could be constructive for academic rationale with the purpose of augmenting the presented information. Moreover, there is abundant possibility for an all-embracing research who wishes to investigate other determinants of motor vehicle insurance and their influences in miscellaneous context.

However, the study holds some limitations that could be further researched and concentrated in the future research works. Some of the major suggestions are as follows:

- With the intentions to depict the inferences at large, the sample size employed in the study is nominal as a part of the academic research work. Consequently, it necessitates the future competent research objectives to choose sufficient sample size so as the inaccuracy or slip-ups is diminished and outcomes are universally pertinent.
- The research work was restricted within the confines of non-life insurance companies. Nevertheless, it necessitates the researcher to consider assorted sphere and also take into account other non-life and life insurance companies for the purpose of the generalization of the outcomes of the research work.
- The study has taken only three variables of determinants of motor vehicle insurance demand comprising of motor vehicle sales, length of road and number of road accidents. There might be multiple determinants of demand for motor vehicle insurance as vehicle claims encountered, promotion and advertisement of services offered by

insurance companies, rate of insurance policy, social security, comparative advantage in terms of attaining an advantageous position, and Quality of service variable that can be given consideration in future research works.

- In order to promote requirement for comprehensive motor insurance, insurance companies should be intended for well-off car holders and towards those individuals who utilize bank credit to procure their vehicles.
- Insurance companies should decrease the time taken to process claims. The claim processing should be made swift and hassle free.
- The law makers or legislators should lay stress on scheming comprehensive insurance with appealing premium.
- The non-life insurance companies should focus on enhancing their network in each nook and corner and develop their products and services accordingly to cater need to every class of individuals.
- A variety of resources, such as social media marketing, hiring buzz agents to create posters and hoarding boards, and crafting customised messaging, can be used to spread information about insurance products and programmes and increase the public's faith as well as positive message towards insurance businesses.
- There should be the provision of better incentives for regular buying motor insurance policies. Mostly, better incentives must be provided to those customers who have not made any claim. So, that they will safely drive their vehicles.
- The insurance system should be practical and effective. It should match the national economic condition. It should be equally beneficial to the company and clients too.
- The terms and procedures of motor insurance should be simplified so that even laymen could understand it easily.
- There should be provision of incentives to the needy and low economic level people so that they will also be benefitted from insurance.

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FACTORS INFLUENCING DEMAND FOR MOTOR VEHICLE IN...**By: Megh Raj Dhungana**As of: May 5, 2024 7:46:12 AM
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ABSTRACT This research looked into the call for the factors influencing demand for motor vehicle insurance in Nepal based on three independent variables consisting of motor vehicle sales, length of road and number of road accidents and dependent variable motor insurance premium. Sample consisted of Shikhar

Insurance Company Limited , Prabhu **Insurance Company Limited** and Siddartha **Insurance Company Limited** out of 14 non- **life insurance**

company. Convenient sampling technique was used. The descriptive and historical research design has been used and Microsoft Excel was employed in order to analyze the data on correlation and regression method. Data were secondary and obtained from data provided by Nepal Insurance Authority, Department of Transport Management, Department of Road, Traffic Nepal Police, Financial Statistics, Annual Report of the selected companies, and Quarterly Reports. The finding of the research concluded that there is significant relationship between motor vehicle sales, length of road and number of road accidents with the motor insurance premium. Additionally, the data indicated a considerable negative link between motor vehicle sales and motor insurance premiums. The length of the road and motor vehicle claims were found to have a significant, moderately