

# **CUSTOMERS PERCEPTION TOWARDS HEALTH INSURANCE IN NEPAL: EVIDENCE FROM KATHMANDU VALLEY**

**By:**

**Navaraj Sharma**

Exam Roll no: 231/17

TU Registration No: 7-2-547-49-2012

*A Graduate Research Report submitted in partial fulfillment of the requirements*

*for the degree of*

**Master of Finance and Control (MFC)**

at the:

School of Management

Tribhuvan University

Faculty of Management

Kirtipur, Nepal

February, 2021

## **RECOMMENDATION**

# CERTIFICATION

## **DECLARATION OF AUTHENTICITY**

I, hereby, declare that this GRP is my own original work and that it has fully and specially acknowledged wherever adopted from other sources. I also understand that if at any time it is shown that I have significantly misrepresented material presented to SOMTU, any credits awarded to me on the basis of that material may be revoked.

Signature:

Navaraj Sharma

Date:

## **ACKNOWLEDGEMENTS**

This thesis report entitled “Customers perception towards health insurance in Nepal: Evidences from Kathmandu Valley” has been prepared in the partial fulfillment of the requirements for the degree of Master of Finance and Control (MFC) in faculty of School of Management, Tribhuvan University. This work is an outcome of numerous help and support provided by various people to whom I am highly indebted.

Firstly, I would like to express my sincere gratitude to my GRP supervisor, Prof. Dr. Bhoj Raj Aryal for his excellent guidance, assistance and friendliness. It is my utmost pleasure to conduct this study under his supervision.

I am heartily thankful to Prof. Dr. Mahananda Chalise, Director of School of Management Tribhuvan University, for his help, suggestion and encouragement which helped me in carrying out my study effectively.

I would like to thank my friends, well-wishers and everyone who directly or indirectly helped me in conducting this study.

Finally, I would like to thank School of Management Tribhuvan University and all the staff of School of Management for providing direct and indirect moral support.

Navaraj Sharma

## Tables of contents

<i>Title page</i> .....	<i>i</i>
<i>Recommendation</i> .....	<i>ii</i>
<i>Certification</i> .....	<i>iii</i>
<i>Declaration of Authentication</i> .....	<i>iv</i>
<i>Acknowledgements</i> .....	<i>v</i>
<i>Table of Contents</i> .....	<i>vi</i>
<i>List of Tables</i> .....	<i>ix</i>
<i>List of Figures</i> .....	<i>x</i>
<i>List of abbreviations</i> .....	<i>xi</i>
<i>Executive Summary</i> .....	<i>xii</i>
<b>CHAPTER I: INTRODUCTION</b> .....	<b>1</b>
1.1 Background of the study.....	1
1.2 Statement of the problem.....	5
1.3 Research Objectives.....	7
1.4 Research hypotheses.....	7
1.5 Limitations of the study.....	9
1.6 Outline and structure.....	9
<b>CHAPTER II: EMPERICAL REVIEW AND THEORETICAL FRAMEWORK</b> .....	<b>11</b>
2.1 Review of Literature.....	11
2.2 Conceptual Review.....	11
2.2.1 Health Insurance.....	12
2.2.2 Health Insurance in Nepal.....	13

2.3 Empirical Evidences.....	15
2.4 Research Gap .....	27
2.5 Theoretical Framework.....	27
<b>CHAPTER III: RESEARCH METHODS.....</b>	<b>32</b>
3.1 Research design.....	32
3.2 Population and Sample .....	33
3.3 Data Collection Procedure.....	33
3.4 Instrumentations (tools and technique).....	34
3.5 Data analysis tools and model.....	34
3.5.1 Descriptive Statistics.....	35
3.5.2 Correlations Analysis.....	35
3.5.3 Regressions Analysis.....	35
3.5.3 Anova Test.....	37
3.5.3 Multicollinearity test.....	37
3.6 Reliability .....	37
<b>CHAPTER IV: DATA ANALYSIS AND RESULTS.....</b>	<b>38</b>
4.1 Descriptive Results.....	38
4.1.1 Demographic Characteristics.....	38
4.2 Correlations Analysis.....	41
4.2.1 Income Constraints.....	42
4.2.2 Liquidity Constraints.....	42
4.2.3 Opportunity Cost.....	43
4.2.4 Lack of Information.....	43

4.2.5 Availability of Government subsidy.....	43
4.2.6 Linkage with government health care.....	44
4.2.7 Risk Exposure.....	44
4.2.8 Trust.....	44
4.3 Analysis of Regression Results.....	44
4.4 Multicollinearity Test.....	49
4.5 Summary of Findings.....	52
CHAPTER V: DISCUSSION, CONCLUSION, AND IMPLICATIONS.....	56
5.1 Discussion.....	56
5.2 Conclusions.....	57
5.3 Implications.....	59
REFERENCES	
APPENDICES	



## List of Tables

Table 3.1:	<i>Reliability test</i> .....	37
Table 4.1:	<i>Demographic characteristics of respondents</i> .....	39
Table 4.2:	<i>Descriptive Statistics</i> .....	40
Table 4.3:	<i>Correlations of each independent variables with EHI</i> .....	42
Table 4.4:	<i>Summary output of Bivariate Regression</i> .....	46
Table 4.5:	<i>Summary output of multivariate Regression Model</i> .....	48
Table 4.6:	<i>Analysis of Variance (ANOVA)</i> .....	49
Table 4.7:	<i>Multicollinearity test</i> .....	50
Table 4.8:	<i>Result of hypothesis tests</i> .....	51

## List of Figures

<i>Figure 2.1: Theoretical Framework</i> .....	28
--	----

## **List of Abbreviations**

ANOVA	Analysis of Variance
ASA	Association for Social Advancement
BAAC	Bank for Agriculture and Agricultural Cooperatives
BRAC	Bangladesh Rural Advancement Committee
BRI	Bank Rakyat Indonesia
CGAP	Consultative Group to Assist Poor
DISMEMBERS	Distance between Members
DW	Durbin Waston
GO-NGO	Government Organization-Non Government Organization
JLL	Joint Liability Lending
LPDs	Lembaga Perkreditan Desa
MFC	Master of Finance and Control
MFIs	Microfinance Institutions
NGOAB	Non-Government Organization Affairs Bureau
NRB	Nepal Rastra Bank
PKSF	Prime Minister Office and Palli Karma Shayek Foundation
RDRS	Rangpur Dinajpur Rural Service
EHI	Enrollment in Health Insurance

## **Executive Summary**

Customer's perception is one of the important tools for measuring the health insurance performance of health insurance clients through which the insurance company can identify the behaviors of clients regarding customer's perception in order to attain a set of objectives oriented towards the growth and stability of the insurance companies. The study aims to analyze the Customers perception towards health insurance in Nepal: Evidences from Kathmandu Valley. The study employed survey based structured questionnaire distributed to 250 respondents from which 200 responses were collected. Collected data were analyzed by using Descriptive statistics and Inferential Statistics.

Moreover, to examine the impact of customer's perception on health insurance, researcher has used income constraints, liquidity constraints, opportunity cost, lack of information, and availability of subsidized government health care, linkage with government, risk exposure and trust of the clients as major independent variables. However, Gender, age, education, sex, income and marital status of the clients are taken as moderating variables. Furthermore, enrollment in health insurance as an indicator of health insurance has been used as dependent variable.

To fulfill the purpose of the study, eight hypotheses were set. Correlation analysis and regression analysis were performed to check the relationship between various variables and impact of independent variables on dependent variable.

The study found that income constraints, liquidity constraints, lack of information, availability of subsidized government health care, linkage with government, risk exposure and trust of the clients have the significance positive relationship on enrollment of health insurance in Nepal. Therefore, these explanatory variables play an important role in health insurance of Nepal. However, opportunity cost has no such role in enrollment in health insurance of Nepal. Similarly, from the same study, it is found that, there is high impact of income constraints, liquidity constraints, lack of information, availability of subsidized government health care, linkage with government and risk exposure of the clients have impact on health insurance in Nepal while slightly low impact of opportunity cost and clients trust on enrollment in health insurance of Nepal i.e. health insurance of Nepal.

# CHAPTER I

## INTRODUCTION

### 1.1 Background of the study

Peoples cannot plan for getting sick. Almost all individuals need medical attention at a certain time in their life. Good health is the wealth of a person. Only healthier person can do the things what he/she wants. Every citizen shall have the right to get basic health care and have equal access to health services. These are the fundamental rights guaranteed in the Constitution of Nepal. But the health services are not free. Health and Medical expenses are highly expensive than other expenses of a person. Nepal has one of the highest proportions of out of pocket expenditures on health and around 25% of the people are living below the poverty line (Kandel, 2018).

According to Nepal National Health Accounts 2016, the estimated Current Health Expenditure in the current price was NPR 141.46 billion (6.3% of GDP) and General Government Health Expenditure from all the sources was NPR 40.31 billion where one third was spent on the curative services followed by preventive care (24.7%) and capital formation (24.1%) in the year 2015/16. In the context of financing sources and their institutional arrangements, households Out-of-Pocket (OOP) payment at 55.4% of all the current funds for health care services and goods, was the major source of funding the health system of the country in the year 2015/16 (NNHA,2016). Households were the largest agents of their own health spending by managing 55.4% of Current Health Expenditure and 13.8% of the households had experienced catastrophic expenditure on health (SHSP, 2016). Therefore, there is a need to develop an alternative mechanism which can protect the poor from the catastrophic situation. Health insurance, if properly designed, can decrease the cost and increase the access to quality health care. The enrolment of health insurance improves the utilization of health care services and reduces catastrophic health expenditure.

In recent years, Insurance is receiving a huge political commitment and emerging as a reform strategy in Nepal. Government of Nepal guaranteed the right to get basic health care and have equal access to health services for every citizen in the Constitution. Besides, Nepal aims to fulfill its commitment to achieving Goal 3 of the United Nations Sustainable Development Goals, which is ensuring good health and wellbeing of the people by 2030 (NEPAL, 2019). For health care services, the Government of Nepal has started a health insurance program in many districts.

The health insurance program has been initiated with the objective of improving access to and utilization of quality health services. According to the health insurance board, the program was started from three districts Kailali, Baglung and Ilam in the FY 2016-16. Now it has been extended to 24 districts with overall enrolment of more than three lakh people. (NEPAL, 2019)

Health insurance program is to have access for preventive, curative and rehabilitative health services. In the other hand, Private insurance companies are also growing rapidly and trying to do business. Health insurance companies like Shikhar Insurance Company, Life insurance company Nepal, Metlife Insurance Company; Siddhartha Insurance Company expanded their services and advertising aggressively to engage in health insurance to publics. Social health security program has played an exciting role in health care systems. Within a very short period of time, it has been able to enrol an encouraging number of members. This will help to reduce the huge expenditure on health care services and increasing access to poor people.

While going through the health expenditure data of households and government commitment towards health insurance, the health insurance industry needs to grow rapidly but the situation is different in Nepal. The annual report of the Social Health Security Program 2016/17 showed very few numbers of increments in enrollment of publics in Health Insurance Program of Government. Health Insurance Industry is not as big as it to be. Kandel (2018) pointed 6 major reasons for not growing health insurance for government program: poor governance and leadership, status of financing in initial stage, inadequate skilled and trained health workforce, status of well-delineated service delivery mechanism and provision of health Services and infrastructure, advanced medical products and technologies and efficient and effective information system.

Nepal is a multi-ethnic society with more than 3 million people including Brhamin, Chhetri, Tharu, Rai, Limbu and numerous indigenous communities living side-by-side. Despite the country's astonishing economic growth in the last two decades, the Nepal healthcare sector is still developing. Currently Although the Nepal government continuously allocates funds to improve its public health care infrastructure, others allege that government officials indirectly encouraged the private sector by allocating insufficient funds for the public sector healthcare (Rameshand Wu, 2008). In comparison to neighbouring countries such as India and China, with highly state funded public health sector, the Nepal government has managed to maintain a balance between private and public healthcare. Nepal has achieved this balance mainly through gradually reducing

public hospital funds, while avoiding any political backlash (Ramesh and Wu, 2008). This has resulted into significant private healthcare provider growth particularly in urban areas.

Today, private healthcare plays a significant role in Nepal overall healthcare sector growth. This is also evident by recent growth projections – that Nepal private health carers will be responsible for half its needs by 2020 (Ramesh and Wu, 2008). These trends indicate that a highly competitive healthcare industry is emerging in Nepal, where private healthcare will face competition from existing public healthcare facilities and the growing private enterprise. Traditionally, private healthcare providers are perceived to provide healthcare more efficiently and robustly (Bhatta, 2001).

The difference between private and public sector organization is well documented in the literature (Zeppou & Sotirakou, 2003). These differences are largely environmental– the situation in which these organizations operate. The private sector is considered more efficient compared to public sector owing to different incentives, market orientation and a decentralized business model (Bhatta, 2001). These fundamental differences provide strategic advantages leading to private sector growth and profitability. Nevertheless, these advantages are costly. The biggest is raising customer expectation regarding service quality (SQ) provided by private healthcare institutions. The only way private healthcare providers can manage and exceed these expectations is by continuously measuring customer expectations and perception. This allows a service provider to better align it, to ever demanding customers, without losing them. This requires a robust and reliable instrument that captures service quality expectations and perceptions from a customer’s perspective.

The health insurance policy came as an effort to reduce impoverishment and catastrophic health expenditure, acknowledging that the current system of health care cannot fully identify and protect the poor. However, insurance contributions and copayments can similarly be a barrier for access to insurance, and it is critical to ensure easy enrolment of the poor and marginalized population into the social health security scheme. Various options need to be explored.

With very clear understanding of the health care needs of the Nepalese people and available financial prospects, the overall scheme of social health security including the benefit package can be crafted to include coverage of major health services including non-communicable diseases. Also, engaging the private sector as service ‘providers’ for the health insurance scheme, as envisioned in the policy, needs clear regulations and fair

pricing for all services to be covered by the insurance scheme to ensure quality and sustainability as well as to make participation attractive to private providers. Regulations should include such issues as accreditation mechanisms for private providers, specification of minimum benefits to be provided to those insured, pricing control and reimbursement mechanism, protection for poor and vulnerable groups in private care, and monitoring mechanisms.

In essence, the whole idea of insurance is to pool the risks of a large number of people and share the financing of adverse events that strike at random, through prepayment of a contribution, so that no or limited payment is required at point of care when needs arise. This results in redistribution of resources from those who stay healthy to those who become sick. Low enrolment and retention puts the sustainability of the scheme at risk and reduces the services that can be included in the benefit package. Mandatory contributions to an SHS scheme are therefore preferable, but are a major challenge to implement in countries with a large informal sector. Voluntary enrolment further entails a risk that only those who need the service enrol, which also defeats the purpose of sharing risks. Careful design can to some extent reduce, but not eliminate this risk.

The primary health care system in Nepal has an extensive network with at least one health facility in each village development committee with female community health volunteers in the frontline. However, without focusing on further strengthening of the peripheral health system and ensuring equitable distribution of health services, the government's intention to implement health insurance might not be sufficient for improving access to quality health services that are responsive to people's need.

Therefore, health system strengthening should move along with the roll-out of SHS by strengthening demand and supply side. However, Nepal is taking a risky approach by moving toward health insurance without having strong supply and demand side. Countries in transition to insurance programs have made reforms on health financing, such as increasing tax revenues to subsidize target populations, broader risk pools, and emphasis on channelling pooled resources for delivery of care through demand-side and/or supply-side financing mechanisms. In addition, the World Health Report 2010 highlights that in removing barriers to accessing health care, elimination of direct payments is necessary but is nonsufficient alone; costs of transportation and loss of income can have more impact than direct payment of services.



This can, for example, be addressed by providing refunds for transportation cost, conditional cash transfer, and microcredit which allows poor households financial assistance to be used for seeking health services. Demand for health insurance membership cannot be delinked from the quality of health services which the scheme gives access to. Membership will be less attractive if services are of poor quality. Currently, in efficiency of health services is a particular problem, as 2040% of resources spent in health are wasted which could rather be used in achieving universal coverage. Improving the efficiency of hospitals, motivating the health workers, using appropriate technology and early and prompt care can significantly improve the quality of health services. A review of the free health care program showed the need for improvement of the Nepalese health system in areas such as drug availability, human resources for health, and quality. Thus, this suggests that a comprehensive approach should be taken in which the quality of the health care system is improved simultaneously with roll-out of the SHS.

## **1.2 Statement of the problem**

Health Insurance Industry is a very small industry in Nepal. The plan of Government to enrol publics in health insurance is not successful. Private insurance companies are not able to create concerns. This research will identify the possible factors which affect the insurance buying behaviour of publics. The research will be more focused on perceptual factors of buyers which shape ultimate buying decisions and those factors association with enrolment in insurance.

The literature on perceptions of health insurance in the Nepalese context was found to be scanty, as the previous studies on the health insurance enrolment identified the various barriers and the determinants related to socio-economic variables only. Keeping this in mind, the present study first will identify the perceptions related to health insurance and second the associations of the identified perceptions with willingness to enrol for the health insurance.

Health insurance is generally referred to the risk transfer of low income to the insurance company. It is a new concept after the innovation in context of Nepal. Onduso (2014) conducted the research on factors influencing penetration of health insurance in Kenya and established that the low income, poor distribution channels and status of sufficient education affected the uptake of insurance services and products. Asmare and Worku (2018) found that micro insurance and financial literacy have an influential impact on house hold demand for health insurance products. This study focuses on customer

perception on health insurance of Nepal – an important subject that has received little critical attention in the literature on health insurance. Health insurance is important because it is a necessary, though not sufficient, condition of sustainability. Several studies had been undertaken in different countries regarding a health insurance and result varied from country to country depending upon culture and peculiarities.

Bassem (2008) in his study found that the health insurance is influenced positively by the internal rule of conduct, the same business, the knowledge of the other members of the group before his formation, the peer pressure, the self-selection, the sex, the education, and the non financial services. However, the homogeneity, and the marital status are among the main factors acting negatively on the health insurance (Feroz and Malhotra 2011). Wydick (1999) in his study in Guatemala recorded that social cohesion and the strong social tie have rather negative than positive impact on health insurance rates. However, Noglo and Androuais (2015) conclude that social capital positively affects the health insurance.

Onyeagocha and Chindebelu (2012) measures the loan health insurance of southeast states of Nigeria by studying outreach, shocks, income , assets size and credit officer's experience as a major determinants whereas Pasha and Negese (2014) measured health insurance of citizen of Ethiopia by considering socio economic factor and knowledge factor. Although a number of researchers studied the issue previously, the setting of empirical analysis is varied in different result Therefore, it is important to examine the theoretical soundness and impact of health insurance towards customer perception. Therefore, in this study, an attempt is made to assess the customer perceptions towards health insurance and to examine its impact on health insurance.

Thus, analysis of customers perception towards health insurance in the area like financial literacy, trust, quality of services, information of risk sharing are the problem of the statement. To understand this phenomenon, the currently study investigates the customers perception towards health insurance products in Kathmandu Valley.

The current study seeks to provide answer to the persistent question such as:

1. Does the income constraint effect the enrolment in health insurance?
2. To what extent liquidity constraint impact the enrolment in health insurance?
3. Does opportunity cost impact the enrolment in health insurance?
4. To what extent status of information impact the enrolment in health insurance?

5. Does the availability of subsidized government health care impact the enrolment in health insurance?
6. Does the linkage with government hospitals impact the enrolment in health insurance?
7. To what extent does the risk exposure affect the enrolment in health insurance?
8. To what extent status of client of trust impact the enrolment in health insurance of Nepal?

### **1.3 Research Objective**

The general objective of the study is to identify the relation of income constraints, liquidity constraints, opportunity cost, status of information, and availability of subsidized government health care, linkage with government hospitals, risk exposure and trust on customer perception in health insurance.

#### **Specific objectives:**

- To identify the impact of variables like; income constraints, liquidity constraints, opportunity cost and status of information towards health insurance in Nepal.
- To assess the impact of availability of subsidized government health care towards health insurance in Nepal.
- To find the effect of linkage with government hospitals towards health insurance in Nepal.
- To examine the impact of variables like; risk exposure and trust towards health insurance in Nepal.

### **1.4 Research Hypothesis**

To study the customers perceptions towards health insurance, following hypothesis are formulated.

#### **Hypothesis 1**

Ndurukia, Njeru and Waiganjo (2017) examined the determinants of demand for micro insurance services in Kenya show the positive significant of income level and determinants of micro insurance demand. It indicate that higher the income level higher the demand of insurance services.

*H1: There is a significant impact of income constraints on health insurance.*

#### **Hypothesis 2**

Dong et al. (2009) found that a poor health insurance services positively affected on drop out or increasing rate of unsubscription of insurance or people decided not to renew their membership in following years. Author found that the status of quality of health insurance services increase the drop out of insurance product.

*H2: There is a significant impact of liquidity constraints on health insurance.*

### **Hypothesis 3**

*H3: There is a significant impact of opportunity cost on health insurance.*

### **Hypothesis 4**

Chankova, Sulzbach, and Diop (2008) in their study found that there is a positive association between the education of house hold head and mutual health organization enrollment. They found the strong evidence that education of the head of household is likely to contribute to better understanding of the importance of health insurance.

*H4: There is a significant impact of status of information on health insurance.*

### **Hypothesis 5**

*H5: There is a significant impact of availability of subsidized government health care on health insurance.*

### **Hypothesis 6**

Karlan et al. (2012) found that the clients having a default loan increase the demand of insurance only when there is less support of government. Bidding the credit constraints would increase the investment on farming activities.

*H6: There is a significant impact of linkage with government hospitals on health insurance.*

### **Hypothesis 7**

Galarza and Carter (2011) from their field experiment of risk preference and demand, for insurance in Peru found that insurance help to reduce the fear of losing the collateral that prevent potential borrowers from taking a loan. It also found that low and moderate risk aversion would stick to the safer projects

*H7: There is a significant impact of risk exposure on health insurance.*

### **Hypothesis 8**

Cole et al. (2013) found that the strong consumer protection regulation that commits companies to honour their contract may help built the trust. Another finding is having a higher level of trust significantly increase the insurance take up. Trust has been the one of the most important determinants for micro insurance and financial product

H8: *There is a significant impact of trust on health insurance.*

### **1.5 Limitation of the study**

The following occurred during the research study, the limitations are as follows:

- The study is based on the customer's perception on health insurance in Kathmandu valley only. Therefore one should be cautious while generalizing the result to the demand of health insurance.
- Only few variables such as of income constraints, liquidity constraints, opportunity cost, status of information, and availability of subsidized government health care, linkage with government hospitals, risk exposure and trust are used in the study. Other variable such as religion, peer influence and coverage of insurance, awareness and accessibility of insurance could not have been considered.
- The model used in this study is limited to regression. Simple statistical tools are used in order to avoid complexity.
- Status of relevant literature particularly in Nepalese perspective is another limitation of this research.
- The primary study is conducted within the limited geographical area. Therefore, the result obtained from the study cannot be generalized.
- The study is based on the primary data, a structure questionnaire survey technique is use in the study. Thus, study might be subject to sampling and non sampling error. Because humans are subjective and response are dynamic in nature, which may create biases on the study.
- The study is further limited to three major health insurance schemes. Other insurance such as property micro insurance, credit health insurance and educational health insurance could not have been considered.

### **1.6 Outline and structure**

The study comprises of three main sections: preliminary sections, body of the report and supplementary section. The preliminary section consists of title page, certificate declaration of authenticity, acknowledgement, and table of contents, list of figures,

abbreviations used and executive summary. The body of the thesis is further divided into five chapters: introduction, related literature and theoretical framework, research methodology, analysis and results and discussion, conclusion and implications. The final section of the report comprises of bibliography, appendix.

The introduction chapter under body of study consists of background of the study, problem statement, research questions, research objectives, hypotheses, limitation and structure of study.

The literature review chapter deals with findings of the previous researches related for the current study. Different research works related to customer's perceptions on health insurance are discussed in order to prepare a base for the study. Further, the chapter consists of theoretical framework defining each dependent and independent variables based on previous literatures.

The third chapter discusses research methodology used for the study. It comprises of research design, population and sample, sources of the data of the research, data analysis and different tools used.

The fourth chapter has included analysis and result of the study. It comprises of various tables, figures intended to answer the objective and research question of the research. The last chapter deals with discussion, conclusion and implication of the study. Under the discussion part, comparisons of previous findings and present study are conducted. At last conclusion and implication were drawn out.

Finally, the supplementary section comprises of references, appendix that has been included and incorporated in the study.

## **CHAPTER II**

### **RELATED LITERATURE AND THEORETICAL FRAMEWORK**

#### **2.1 Review of Literature**

This chapter deals with literature review and provides theoretical framework of the study associated with monetary policy and economic growth. It is divided into two sections. First section consists of an in-depth review of related studies and second sections presents a theoretical framework of the study. This section also deals with a brief review of empirical works in the context of Nepal.

A literature review is a text written by someone to consider the critical points of current knowledge including substantive findings, as well as theoretical and methodological contributions to a particular topic. In this section, the brief review of existing studies has been presented. This section is divided into three different parts. First and second part deals with the major studies or foreign article whereas; third part deals with related studies in Nepalese context. The review of literature has been conducted based on the chronological order and categorize into different periods.

#### **2.2 Conceptual review**

Risk is defined as uncertainty concerning the occurrence of a loss (Rejda, 2011). It can be a human loss or a financial loss. Human loss can be of due to car accident, building collapse due to earth quack and financial loss can be of due to interest rate risk, credit risk, foreign exchange risk, liquidity risk etc. Risk can be of two types. i.e. subjective risk and objective risk. Subjective risks are those risks, which is based on a person mental condition or state of mind. Subjective risk cannot be measure by using a mathematically calculation whereas objective risk are those risk which is defined as the relative variation of actual loss from expected loss. That objective risk can be calculated using a statistical calculation such as standard deviation or the coefficient of variation. So in order to minimize a risk, insurance is an important tool.

Insurance is a financial product that transfers the risk where a business enterprise assumes and shoulders the uncertainty of another business in return of the payment of premium (Waugham, 1989). Insurance is a form of a risk management against the risk of a uncertain loss. Insurance is a means of protection from the financial and non-financial loss. Insurance is a contract or an agreement between the insurer and insured, by which

company undertakes to provide a guarantee of financial compensation for the specified risk of a person or business loss, damages, death or illness in return for payment of specified premium. Insurance can also be defined as providing financial or non-financial security to the people and their property against the risk and uncertainty events. In other words, insurance is the best means for security to human life and property from various risks. It is a kind of investment, from which one gets return only when certain loss occurred from predetermined incidents. According to the commission on Insurance terminology of the American Risk and Insurance “Insurance is the pooling of fortuitous losses by transfer of such risks to insurers, who agree to indemnify insured for such losses, to provide other pecuniary benefits on their occurrence or to render services connected with risk”

From the economic point of view, insurance is a business through which the scattered savings are collected in the form of premium and become an important source of funds for capital investment. Generally, premium collected by insurance companies invest in various assets such as stock market, fixed deposit and saving deposit at bank and financial institution, government bond, real estate. Collected premium, Insurance business creates capital fund and promotes development, growth and prosperity of a country. In Nepal, insurance is regulated by Insurance Board (Beema Samiti).

### **2.2.1 Health Insurance**

The term health finance refers to the banking services to the people. It is developed by Muhammad Yunus a Grameen Bank from Bangladesh started giving services such as micro saving, micro credit with or without collateral to the poor people (Armendariz & Morduch, 2005). Financial institutions have been focusing on providing saving and credit services only. Health insurance is a financial service is especially designed for the women in order to increase or achieving the empowerment of woman in a society. However, a growing number of micro finance institution practitioners have recognized that providing credit is not enough for the sustainable development of the poor. A heartfelt requirement for other financial activities like insurance and allied services alongside saving and credit services has been noticed. Formal insurance services are not accessible to the poor because of high premium and complicated procedures. After the huge success of micro finance, the idea of micro insurance developed when the women face a various types of risk such as risk of business due to the flood, earth quake, land slide, damages by fire, accident etc. So, in order to minimize the risk from catastrophic loss micro insurance ideas for the poor people or marginalized, disadvantages woman has been developed.



Health insurance is insurance to the people for the protection of financial and non-financial loss. Here, health insurance consists of two words i.e. “Health” and “Insurance”. Health refers to the conditions of human body that each insurance policy generate the premium price where as Insurance refers to protection of risk from uncertainty concerning the occurrence of a loss. Health insurance refers to the pool that clients must work with, at a community level (Meghan, 2010). Due to the low income of people, Social structure has excluded the disadvantages populations form the access of larger insurance policy (Dror, Radermacher, & Koren, 2007).

Health insurance is a financial arrangement to provide a safeguard to the clients in exchange for periodic payment of agreed premium price proportional respect to the prospective risk and the cost of risk included(Churchill, 2006). The mains function of health insurance is pooling a size of risk. Health insurance provide a various types of insurance product. These health insurance include health risk. Health risk is concerned with the risk of illness, injury, accident or death where as property risk is concerned with the damages or loss of moveable and immovable assets. A variety of health insurance products are available such as micro health insurance, live and stock or cattle insurance, cash crops insurance, credit insurance, insurance for natural disaster, disability insurance, insurance for theft etc. Insurance services can be deliver to the clients via partner agents such as Commercial bank, micro finance, community based model, credit union etc.

### **2.2.2 Health Insurance in Nepal**

Nepal contribute agricultural sector to 28 percent of Nepal GDPs and is a source of livelihood for more than two third of Nepal population. Farmers face various types of risk including natural disasters; status of irrigation and status of know-how which has made agricultural sector more labour intensive and less profitable. Nepal is less developed countries are vulnerable to different types of risks and adopt various strategies to reduce the impact of the loss. Insurance services are very essential for the low income household to cope with uncertainties and emergencies like illness or injury, death, natural disasters, the theft and life cycle needs (Berger, 2018).

The concept of micro insurance has not been developed properly in the Nepal due to status of a law, skilled human resource as well as a huge requirement of the service to protect the low-income groups. A large number of people in the country fall under the bracket of low-income groups, micro insurance schemes are necessary to protect them against specific

perils in exchange for regular premium payment proportionate to the likelihood and cost of risk involved.

Health insurance is not a historical concept for the insurance sector. However, health insurance is newly emerging types of insurance services in Nepal. Health insurance is an emerging field of financial inclusion for insurance companies, regulators and other stakeholders, As a result, regulators have focused on creating a conducive environment to sell micro insurance to a large number of low-income household. Microfinance institutions village based cooperative and non-governmental organization have been practicing micro insurance since along.

The first insurance company of Nepal Insurance and Transport Company Limited were established in 2004 B.S. as a subsidiary company of Nepal Bank Limited. It was the only one national insurance entity until the establishment of Beema Sansthan (Insurance Board) in 1968 A.D. Insurance Act, 1968 made a provision of Insurance Board as a sole authority to regulate the insurance activities within Nepal.

The Insurance Board (IB) has introduced a directive on micro insurance scheme in Nepal in January 2013 to encourage insurance companies to develop and issue a agriculture insurance products. After the issuance of directive, on-life insurance companies have begun selling micro insurance. NLG Insurance Company had previously started offering livestock insurance. Prior to that deposit and credit guarantee fund a government own entity to offer insurance for deposit, loans, and offered livestock insurance to tie up with a loan. Shikhar insurance introduced the weather index insurance (WII) with the technical and financial support of sakchyam for the first time in Nepal (Berger, 2018).

Micro insurance has been defined as a targeted insurance of life and properties of economically, geographically and socially backward people. Under the current IB directive, the policy amount has been fixed from Rs 1, 00,000 to Rs 2, 00,000 and annual premium has been fixed at 0.1 to 5 percent. However, the clients of micro insurance service are liable to pay only 25 percent of the total premium and remaining 75 percent is subsidized by the Nepal Government so that most of the farmers are benefitted by this insurance policy. Currently, only 17 percent of the total population has benefited from insurance services, according to the insurance board (IB).

The insurance product available in Nepal are as follows: birds insurance, cattle insurance, crop insurance, fish insurance, fruits insurance, tarkari bari insurance, potato insurance,

mushroom insurance, honey bee insurance, ostrich insurance, micro household insurance, micro health insurance, micro personal accident insurance to rural people at the grassroots level. In April, 2019 AD, Insurance Board has also added a new micro insurance policy such as goat insurance and coffee insurance

### **2.3 Empirical Evidences**

Cao and Zhang (2011) presented a paper hog insurance adoption and supplier discrimination: A bivariate probit model with partial observability found in their studied farmer's age have a positive impact on insurance demand but are different due to the quality of services provided by the different insurance company. In their research, data were collected from the 531 household that consist mainly from the insurance company about policy coverage, premium, subsidy, reported livestock death and final payment etc. Data has been analyzed using the descriptive statistic like mean and standard deviation. 3 models such as univariate probit model, bivariate probit model with partial observability and bivariate probit model with demand being observed has also been used to analyze the demographic characteristic. Their result found that the age of farmer has a positive impact on the demand of insurance. Education seems to have no significant impact on demand of insurance whereas credit accessibility and wealth had significant impact on demand intention using the bivariate probit model with partial observability model.

Chen, Hu, and Xiao (2013) studied the small holder participation in hog insurance and willingness to pay for improved policies: evidence from Sichuan province in china by collecting the data from the 100 sample from Zizhong, Sichuan using a structure a questionnaire survey. In their research survey, questionnaire was composed of three main sections. First section contain questionnaire such as household demographic and socio economic characteristic based on the agricultural operation. Second section asked farmer about the hog insurance practices and the third section contain question on how the respondent financed their farms. Author has used the descriptive statistic for the analysis. In their survey, they found that demographic characteristic such as age plays an important role in farmer's insurance participation decision.

Chankova, Sulzbach, and Diop (2008) investigate that the impact of mutual health organization by analyzing the households survey data from the Mali, Ghana and Senegal by using the logistic multiple regression model. 2659 in Mali, 1806 in Ghana and 1080 in Senegal primary data has been collected for the study. Questionnaire and curative care questionnaire has also been used. Curative care questionnaire are for those who has been ill

and or injured for 2 weeks. Their studied found that there is a positive relationship between the household demand for micro health insurance and the age of women. The age is divided into 4 categories such as age between 0 to 4 years, 5 to 14 years, 14 to 49 years and above 50 years for both male and female.

Chankova, Sulzbach, and Diop (2008) in their study, descriptive statistic of the sample has been used to find out the gender difference in registration member of the mutual health organization from three locations. The sample data are collected by separating the member and non-member of mutual health organization in order to study the household survey. The sample size from Ghana is 12006 (53.7% Female and 46.3% Male), Mali is 18750 (51.2% Female and 48.8% Male) and 10837 (50.9% Female and 49.1 Male) in Senegal. In their studied, households headed by women are more likely to be enrolled than the house hold headed by the men. Their findings reflect that women may be more likely to internalize the costs and consequences associated health care that men and thus prioritize health related expenditure.

Cohen and Einav (2007) finding remarked that women are more risk adverse than men. The study of the author review showed the positive association between the houses hold gender and the purchase of micro insurance schemes. The author has collected a data from a single insurance company that operated in the market in Israel. The data contain information about the new policy holder. The data has been analyzed using a primary data through the questionnaire survey. Descriptive statistic like mean and standard deviation has been used for the analysis for gender.

Similarly, a study of Schneider and Diop (2001) result show that the probability of enrolling in prepayments schemes is equal among all income groups and is determined by factors such as age, gender and education status of the house hold. Result also reveals that there is a positive relationship between the gender and the demand of micro health insurance of the house hold. The data has been analyzed using the logistic regression model for household probability to demand community based health insurance. The data were collected in the prepayment scheme household survey, conducted by PHR in collaboration with the Rwandan National Population Office. The data were collected from the three-district form Byumba, Kabgayi and Kabutare having a similar socio economic situation using a interviewed method among the 2,518 house hold. The prepayment house hold survey used three structured questionnaire for the data collection- first for the

socioeconomic household questionnaire, second a curative questionnaires for data collection and third a preventive care questionnaire.

In the study of Giesbert (2010), the author found that gender and demand of micro life insurance of household has a positive significance. The author has used the data analyzed using a cross-sectional determinants of household decision to take up a micro life insurance using data from a survey conducted among 1030 insured and non-insured households in rural Ghana in 2009.

Anderson and Nevin (1975) from their survey obtained that young married couples in the middle categories of the expected income distribution bought less life insurance than those in the lowest and highest category. Author also found that both husband and wife before marriage life insurance portfolio were significant in explaining the amount of life insurance purchased. Author also found that when the husband owned neither cash value nor term life insurance before marriage, the household purchased less than average amount of life insurance after marriage, whereas the wife owned cash value or term life insurance before marriage, the household purchased more than the average amount of life insurance after marriage. Another finding is wife life insurance portfolio before marriage influences the young married couple's life insurance behaviour after marriage could have implications for the insurance industry. For the analysis of the data, author had collected a primary data of 230 young couples from Peoria and Decatur who were married during a summer month of 1968. Author has used a regression model to analyze the collected data.

In their study Hammond, Houston, and Melander (1967) determinants of household life insurance premium expenditures: An empirical investigation found that married households with children spend more on life insurance than married without children or unmarried households. General regression model has examined for the study considered life insurance premium expenditures by the married with children and married without children households.

In his Berkson (1973) preliminary investigation on birth order, anxiety, affiliation and the purchase of life insurance found that only unmarried children would purchase more life insurance than the married ones. The 254 respondent data from California state college, Los Angeles during the summer 1969 and 101 respondent data from Fairleigh Dickinson University, New Jersey were analyzed by using the multiple regression model and support for the hypothesis which is indicated by only one of the sample.

Smare and Worku (2018) in their study determinants of micro insurance demand in Jimma Zone found that employment status, level of education, house hold size, premium price, trust has a significant impact on the demand of micro insurance products where as age, gender, influence has a insignificant impact on the demand of micro insurance products . The data used in this study was a cross sectional which is collected from the house hold using a structure questionnaire and in depth interview with the official of insurance companies and microfinance institution that provide a micro insurance product and services. The data was collected in February 02-26, 2018. 400 questionnaires were distributed for the respondent and 389 questionnaires were returned and have been used for the purpose of analysis. The collected data was analyzed using a multinomial logistic regression model.

Bending, Giesbert and Steiner (2009) in their study Savings, Credit and Insurance: Household Demand for formal financial Services in Rural Ghana. The author found that having an employment opportunities enhance the demand of micro insurance service take up. The survey was undertaken in the context of a pilot study from 351 respondents for a research project on the demand for micro insurance among a low income house hold in sub Saharan Africa. The author has also used a multivariate probit model on household survey data from rural Ghana.

Dash (2018) study found that occupation has a significant impact on the customers buying decision. In his study, Government employees have higher insurance policies than that of private employees. For the study, data has been collected from a rural Odisha with the sample of more than 400 life insurance policy holders. ANOVA test has been carried out to find out the impact of customer buying decision. Other tools has also been used such as correlation analysis, linear multiple regression and factor analysis.

Dror, Radermacher, and Koren (2006) found that household size is the key determinants of household readiness to purchase health micro insurance, as the size of the household increases lead to increase the family desire to purchase micro insurance is not meant to cover only the key sources of income but include the entire family. The study is conducted in India in 2005 provides evidences on willingness to pay gathered through a unidirectional bidding game among 3024 house hold in seven location where micro health insurance units are in operation. Author has used a in depth interview and linear multiple regression model on the house hold willingness to pay.

Ito and Kono (2010) in their study, titled, “Why is the Take up of micro insurance so Low? Evidence from a Health Insurance Scheme in India” found that house hold having higher ratio of sick members were more likely to purchase the insurance. On the other hand, author also found that households with sick household heads are less likely to purchase a premium it because of less income flow and difficulty of managing the insurance premium. For the study, authors have collected 209 households’ primary data from three village of rural Bangalore, Karnataka in September 2008.

Asmare and Worku (2018) found that, there is a positive marginal effect between the household size and the subscription to the health of health insurance. Author also found that there is a negative marginal effect between the household size and subscription to property and crops micro insurance scheme. The data used in this study was a cross sectional which is collected from the house hold using a structure questionnaire and in depth interview with the official of insurance companies and microfinance institution that provide a micro insurance product and services. The data was collected in February 02-26, 2018. 400 questionnaires were distributed for the respondent and 389 questionnaires were returned and have been used for the purpose of analysis. The collected data was analyzed using a multinomial logistic regression model.

Arun, Bendig, and Arun (2012) have investigated bequest motives and determinants of micro life insurance in Sri Lanka. Author found that micro life insurance is positively correlated with measure of bequest motives such as the number of children or dependents using the probit and tobit model.

Bending and Arun (2011) studied the relationship between the demand for insurance and level of income. They argue that level of income also effect the purchasing the insurance product. Higher the income lead to the higher the subscribing the insurance product. Higher the insurance premium price leads to not purchasing the insurance product. Status of money is the reason why household do not purchase micro insurance products. For the analysis of data, author has conducted a survey in Sri Lanka in 2008. The survey was conducted in 30 village in all 14 district of all region. Author collected a data in total of 330 house hold for insured and non insured household. Collected data has been analyzed by using a descriptive statistic and binary probit model.

Morris, Carletto, Hoddinott, and Christiaensen (2000) study of valid of rapid estimates of household wealth and income for health survey in rural Africa. Their finding is income also affect a house hold ability to afford the insurance. However house hold wealth and

income are the important distal determinants for health. It is difficult to measure in societies where wage income is negligible and saving is not generally held in the form of money. For the study the primary data has been collected and the total of 2748 data has been collected from different areas of Mali, Malawi and Cote d'Ivoire. Correlation and regression has been done for the analysis of the study.

Jutting (2003) observe that members of community hospital visit less frequent than the non members of community hospital. He also observes that people having a low income also plays a key role in non member's participation in a community based health insurance scheme in rural Senegal. He confirms that community financing through pre payment and risk sharing reduce financial barriers to health care. Risk sharing and pre payment can improve the financial protection for the poor people. A house hold survey was carried for the study in between March and May, 2000. The study was conducted in Senegal in 16 different locations. 346 house hold survey has been conducted for the study. Probit model Descriptive statistic and linear regression model has been used for the analyse of the study.

Ndurukia, Njeru, and Waiganjo (2017) studied the determinants of demand for micro insurance services in Kenya. In their study in Kenya, they adopted a cross sectional survey research design. They adopted both qualitative and quantitative approaches. Questionnaire was used in the collection of primary data, which was analyzed, by using SPSS software. Correlation, Multiple Regression, Normality Test and Auto correlation, Homoscedasticity, multi collinearity and hypothesis testing has been done. Correlation and Multiple Regression analysis was done to test the relationship between the dependent variable and independent variable. The correlation result found that there is a moderate positive and significant correlation between the factors influencing demand for micro insurance in the insurance industry in Kenya. The multiple regression result found that there is a high joint positive relationship between the determinants and demand for micro insurance in which the study finding indicate that the price of insurance has a negative while risk exposure, credit accessibility and income level of insurance has a positive and significant impact on micro insurance demand

Chankova, Sulzbach, and Diop (2008) in their study conducted that, richest are more likely to be enrol in micro insurance. People having a low income that has a higher premium price cannot afford to many house hold and become the barrier form subscribing the insurance product. For the study data has been collected from the Senegal having the



sample size 10837, Ghana having a sample size 12006 and Mali having a sample size 18750. Linear regression has been used for the research.

Thornton, Field, Hyatt, and Solis (2009) observed that lowering the price of insurance encourage people to subscribe the insurance product. Lowering a premium price, one third of insurance subscriber is willing to pay the full price of insurance once the subsidy ran out. It also indicates that short term price subsidies will not be effective means of promoting a insurance enrolment in the informal sector. They also found that the lowering a initial price lead to increase the demand for the insurance so that it help to minimize the risk future possible losses. For the analysis of the study, the author has a primary data in-depth interviewed and has collected 2608 respondents insured having the clients of micro finance and non micro finance. Linear regression model has been used for the analysis of the study.

Cole, Gine, Townsend, and Vickery (2013) found that the rainfall insurance demand is significantly price sensitive and suggest that the high insurance price contribute the low demand. Another finding is reduction of insurance price premium by 10% lead to increase the demand of insurance by 10.4% to 11.36%.For the study, Primary data has been collected from Mahbubnagar and Anantapur district of Andhra Pradesh and Ahmedabad, Anand and Patan district of Gujarat. The data were collected in the year 2006. The sample size of the survey is 1047 land owner household in 37 villages of Andhra Pradesh and the sample size of the survey is 1500 land owner house from Gujarat. Linear probability model has been used to identify the probability of household insurance purchase.

Access to credit to the farmer helps them to insurance their crops to minimize the risk from no rainfall, global warming, landslide etc. Increasing the credit worthiness of farmer and allowing them the opportunity to invest in appropriate inputs to increase the agricultural productivity (Hazell, 1992).

Liu and Myers (2012) investigated that an insurance design allows farmer to enter the insurance contract, delaying the payment of the premium until the end of the insured period. Author highlight the important role that delayed premium payment potentially could play in agricultural insurance markets and programs in developing countries.

Karlan, Osei, Akoto, and Udry (2012) found that the farmer having a default loan increase the demand of insurance only when the bad rainfall hits. Bidding the credit constraints would increase the investment on farming activities. The author conducted a survey in

northern Ghana in which farmer are randomly assigned to receive cash grants, grants of or opportunities to purchase rainfall index insurance or a combination of the two. The survey data has been collected on two year baseline survey on the basis of grant experiment and pricing experiment farmers that were from existing communities. Over all 1,178 data has been collected for the study. Ordinary least square method has been done for the analysis of the study.

Gine (2008) has studied the pattern of rainfall insurance participation in rural India and they found that credit constraints appear to be an impediment to purchasing an insurance product. Insurance with the short term loan that help a credit constrained households pay the premium. For the analysis of the data, surveyed data has been collected in the year 2004 mansoon. Author collected a sample of 267 purchaser respondent from 25 villages among 37 villages in Ananthapur and Mahbubnagar due to the unsold insurance policies in 7 villages. The collected data were used to analyze a probit model and regression model

Townsend, and Vickery (2013) found that the benefit of insurance may be difficult, if the house hold has a low financial literacy or little experience with the insurance product. Having a low financial literacy or education lead to low or weak demand of insurance products. Author investigates that having a low financial literacy or limited to the understanding of the product may make mistake about the insurance purchase decision. Consumer can get a quality of services having knowledge of insurance services. Author also found that there is no significant effect on the demand of insurance. For the study, Primary data has been collected from Mahbubnagar and Anantapur district of Andhra Pradesh and Ahmedabad, Anand and Patan district of Gujarat. The sample size of the survey is 1047 land owner household in 37 villages of Andra Pradesh and The sample size of the survey is 1500 land owner house from Gujarat. The data were collected in the year 2006. Linear probability model has been used to identify the probability of household insurance purchase

Cai, Chen, Fang, and Zhou (2009) evidences suggested that trust or status thereof for government-sponsored insurance products acts significant barriers for farmer's willingness to participate in the insurance program. Author suggested that status of trust should be a crucial consideration in the health insurance revolution. Author collected a data from China Agricultural Census of 2006 and Bureau of Animal Husbandry of 2008. Descriptive statistic, Ordinary Least Square Regression, Linear probability, Probit model and Logit model has been done for the analysis of the data.

Tadesse and Brans (2012) have examined the risk coping mechanism and factors in the demand for micro insurance in Ethiopia. Authors divided qualitative research into the four socioeconomic systems of Ethiopia: Low income urban workers in Addis Ababa; agro-pastoralists in Hagere Mariam, Oromia; Pastoralists in Yabello, Oromia; and coffee farmers in the southern Nations, Nationalities and people's region. The study is based on the primary data using an in-depth interview with key informants and discussion with focus groups that involved four livelihood groups (Urban workers, coffee farmer, pastoralists and agro pastoralists). The research was carried out between August and September 2008. The results of the study confirm that trust in a specific insurance value affects the demand for micro insurance.

Gine, Karlan, and Ngatia (2013) present the paper measuring the direct impact and social network spillovers of providing financial literacy and discount voucher on farmer's decision to purchase index based drought insurance. Author found that the social network spillovers to the provision of financial literacy materials but no spillovers to the provision of discount voucher on farmers decision to purchase insurance. Having a financial literacy when 60% or more of their neighbour also receive financial literacy materials increase the likelihood that a farmer will purchase insurance, when 40% or less of their neighbour receive financial literacy materials decrease the likelihood that a farmer will purchase insurance. Author suggest that the financial literacy materials are efficacious in encouraging take up when farmer social contact are similarly receive access to financial literacy materials. Multiple regression models has been done for the analysis of the study and 904 coffee farmers data has been carried out in 14 villages i.e 12 village in Ruru and 2 village in Ntima areas in Eastern Kenya. Authors first visited all coffee growing households within the enumeration area, interviewed with the coffee farmer and collected some basic information about the coffee farmer.

Asmare and Worku (2018) investigated the determinants of micro-insurance demand in Jimma Zone by employing cross sectional and collected the data from households in Jimma Zone using a structured questionnaire survey. The data were collected from 389 respondent in which the questionnaire were distributed for 400 people and in addition to In-depth interview were also taken with 12 top official of insurance companies and microfinance institution that's provides micro insurance product. The author has used Multi-nominal logistic regression model were employed to determine the determinants of micro insurance demand. The result reveals that delivery channel, premium, adequacy of

micro insurance product and financial literacy has influential impact on household demand for micro insurance product. The result also reveals that the micro insurance need an innovative micro insurance product that reduce the transaction costs through the development of cost effective delivery channel and charging affordable premium in order to increase the households demand for micro insurance products. In addition to both micro insurance services provider and service taker need to increase the knowledge of micro insurance concepts, skills, attitude and need to translate the knowledge into behaviour that's benefit the outcome for both micro insurance service provider and taker.

Uddin (2017) surveyed the micro insurance in India: Insurance literacy and demand located in National Capital Region, India using a structured questionnaire survey. The data were collected form 400 respondent through the judgement sampling and only 356 questionnaires were usable. The questionnaire include the information such as ownership of micro insurance, gender, age, marital status, education, employment, income and insurance literacy. Insurance literacy was measured by using the Bristow- Tennyson Quiz, which consist of 10 questions. The author has used descriptive statistic and binary logistic regression model. The result revels that the insurance literacy has a positive effect on the ownership of micro insurance. Author found that the insurance literacy is the one of the most important factor for micro insurance.

Cao and Zhang (2011) research hog insurance adoption and supplier discrimination: A bivariate Probit model with partial observability found that there is a positive impact between the education and the purchasing a insurance service, some also reveals that there is no significant between the education and demand of micro insurance purchase. In their research data are collected from the 531 household which consists mainly forms the insurance company. Data has been analyzed using the descriptive statistic like mean and standard deviation. 3 models such as univariate probit model, bivariate probit model with partial observability and bivariate probit model with demand being observed has also been used to analyze the demographic characteristics.

Chankova, Sulzbach, and Diop (2008) investigated that the impact of mutual health organization by analyzing the 41,593 households survey data from the Senegal, Ghana and Mali by using the logistic multiple regression models. They found the strong evidence that education of the head of household is likely to contribute to better understanding of the importance of micro insurance.

In their study Ondruska, Pastorakova, and Brokesova (2016) have examined the personal, demographic and economic determinants of the life insurance consumption found that education is the most robust predictors of the life insurance consumption thus help insurer to better understand their potential consumers and to improve their acquisition and segmentation techniques. To find out the result the survey has been conducted in Slovak Republic area from age between 18 to 62 years and selected a valid response almost 870 sample respondent among 1044 respondents. Classification tree method has been done for the test empirically

Cole, Gine, and Tobacman (2013) observed that trust is likely to be particularly relevant to demand for financial products in environment in which formal legal protections are weak. Author found that the strong consumer protection regulation that commits companies to honour their contract may help built the trust. Another finding is having a higher level of trust significantly increase the insurance take up. Trust has been the one of the most important determinants for micro insurance and financial product. For the study, the sample size of the survey is 1047 land owner household from Andhra Pradesh and 1500 land owner house from Gujarat has been collected in the year 2006. Linear probability model has been used to identify the probability of household insurance purchase

Morsink and Geurts (2011) investigated the trust neighbour effect: Local experience and demand for micro insurance suggested that trust play an important role in explaining demand. Author interview with the female heads of 171 households from 11 different local communities in typhoon- prone regions of the Philippines. Researcher found that understanding peers with claim implies that trust is built but is relatively low in the initial stage of micro insurance demand. Researcher has used the logistic regression model that knowing peers with claim, trusted neighbour effect is the most important significant factor explaining demand.

Cai, Chen, Fang, and Zhou (2009) evidences suggested that trust or status thereof for government-sponsored insurance products acts a significant barrier for farmer's willingness to participate in the insurance program. Author suggested that status of trust should be a crucial consideration in the micro insurance revolution. Author collected a data from China Agricultural Census of 2006 and Bureau of Animal Husbandry of 2008. Descriptive statistic, Ordinary Least Square Regression, Linear probability, Probit model and Logit model has been done for the analysis of the data.

Tadesse and Brans (2012) examined the risk coping mechanism and factors in the demand for micro insurance in Ethiopia. Authors divided qualitative research into the four socioeconomic systems of Ethiopia: Low income urban workers in Addis Ababa; agro-pastoralists in Hagere Mariam, Oromia; Pastoralists in Yabello, Oromia; and coffee farmers in the southern Nations, Nationalities and people's region. The study is based on the primary data using an in-depth interview with key informants and discussion with focus groups that involved four livelihood groups (Urban workers, coffee farmer, pastoralists and agro pastoralists). The research was carried between the August and September 2008. The results of the study confirm that trust in a specific insurance values affects the demand for micro insurance.

Galarza and Carter (2011) from their field experiment of risk preference and demand, for insurance in Peru found that insurance help to reduce the fear of losing the collateral that prevent potential borrowers from taking a loan. It also found that low and moderate risk aversion would stick to the safer projects

Dong, De, Gnawali, Soares, and Sauerborn (2009) found that a poor health insurance services positively effected on drop out or increasing rate of unsubscription of insurance or people decided not to renew their membership in following years due to the poor quality of services. In addition to higher the house hold expenditure and status of quality of health insurance services increase the drop out. It is found by using a multivariate analysis. This survey is used to collect information on the factor influencing dropping out from community based health insurance. Survey has been collected at a community based health insurance membership at Nouna, Burkina Faso.

De, Sanon, Bridges, and Sauerborn (2006) investigated qualitative of consumer preference regarding the single element of a community based health insurance scheme implemented in a rural region in West Africa. Author found that consumer decision of joining a insurance is based on the preference of consumer such as premium level, payment modalities, the benefit package and the health service provider network and the community based health insurance managerial structure, which is significantly associated with the choice to subscribe to community based micro insurance. Product quality services preferences were explored through means of 32 individual interviews with house hold head and 10 focus group.

Nguyen and Knowles (2010) their finding of demand for voluntary health insurance in developing countries is benefit of insurance is measured by proximity and quality of a

tertiary hospital in Vietnam's. Data were collected between the age 6 to 20 from the school age children and adolescent student from Vietnam National Health Survey 2001 to 2002

Jehu, and Aryeetey (2012) their investigation on household perception and their implication for enrolment in the National Health Insurance Scheme in Ghana found that house hold insurance subscription is based upon technically quality services, convenience of location , premium price. 3301 Households and 13865 individuals were collected and analyzed by using the multinomial logistic regression to determine the association of identified perceptions on enrolment.

## **2.4 Research Gap**

There has been a number studies about consumers perceptions towards health insurance in different countries. Review of different literatures reveals the different research conducted in different period relating to determinants demand of health insurance in different period and different methodologies for their empirical studies. Health insurance is emerging business in Nepal. Research related to determinants demand of health insurance has not been conducted in context to Nepal. It was therefore necessary to carry out a research on what are the determinants of health insurance demand in Nepal, what is the level of house hold demand for health insurance products and what is the relationship between the dependent variable and independent variable in context to Nepal. In this study, enrolment in health insurance is the dependent variable.

As stated above, in literature review some studies show that the income level, trust, education, financial literacy is positive influence of researched variable while other say income level, trust, education, financial literacy is negative influence of researched variable So, this raised the question about which actually influence of determinants health insurance creating a gap for research for the insurance industries. The different independent variables are of income constraints, liquidity constraints, opportunity cost, status of information, and availability of subsidized government health care, linkage with government hospitals, risk exposure and trust.

## **2.5 Theoretical Framework**

Measurement of consumer's perceptions towards the health insurance is a emerging concept in context of Nepal. The various instruments of measuring consumer perception which the health insurance employs to determine the determinants of health insurance can be classified into the general or quantitative

instruments and the selective or qualitative instruments. On the basis of literature review following conceptual framework is designed for observing the consumers perceptions towards health insurance.

### Theoretical Framework

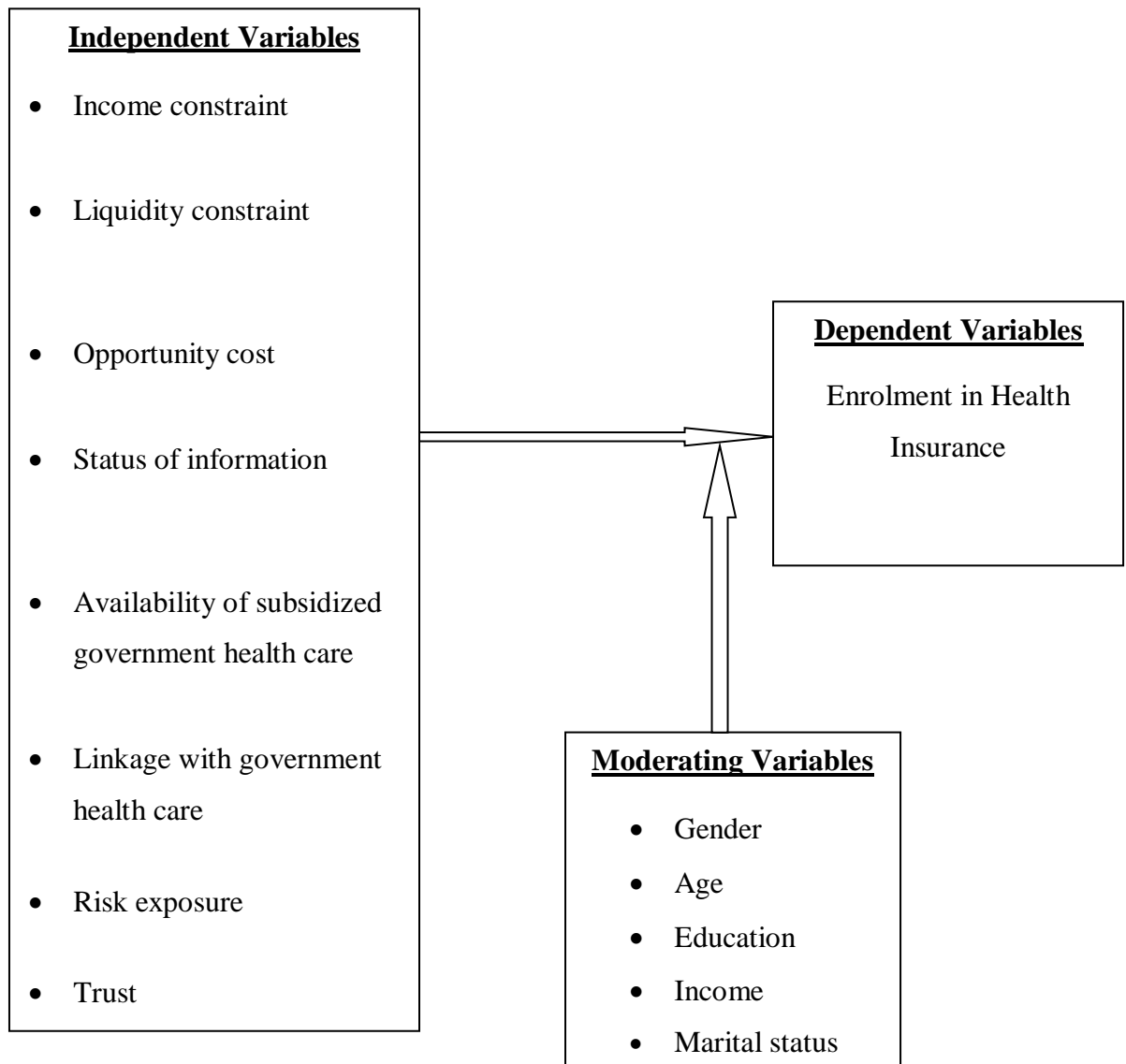


Figure 1: Theoretical Framework

### **Independent Variables**

#### **Income Constraint**

Income is money that an individual person receives in exchange for providing a good and services or through investment. Individual receive income through earning wages by working or making investment in any other financial assets. Bending and Arun (2011)



studied the relationship between the demand for insurance and level of income. They argue that level of income also effect the purchasing the insurance product. Higher the income lead to the higher the subscribing the insurance product. Higher the insurance premium price leads to not purchasing the insurance product. Status of money is the reason why household do not purchase micro insurance products. For the analysis of data, author has conducted a survey in Sri Lanka in 2008.

### **Liquidity Constraint**

"Liquidity" refers to a person's or company's availability of cash. A highly liquid asset is one that can be turned into cash quickly and easily. Some life insurance policies, such as whole life or universal life, build equity as you pay premiums.

### **Opportunity cost**

Opportunity cost is an economics term that refers to the loss of potential benefits from other options when one option is chosen. At the level of the individual, other important components of opportunity cost emerge. One element is time spent seeking or engaging in health care.

### **Status of information**

The status of consumer understanding of health insurance, coupled with inadequate or unclear messaging from government and private insurers, is a major problem when health plan members are supposed to comparison shop for providers and services. ... The informed consumer is a better consumer.

### **Availability of subsidized government health care**

Government health subsidy (GHS) is an effective tool to improve population. The national health status and achieve universal health coverage at a primary care facility, despite of the high price and out-of-pocket costs.

### **Linkage with government hospitals**

Historically, public health agencies, emergency departments, and emergency medical services (EMS) systems have functioned independently from one another and have typically maintained informational systems that were not interactive. Given the rapid growth in information technology, exchange of information has an unprecedented potential for addressing public health emergencies in a timely and effective manner, yet this exchange of information goes largely unrealized.

## **Risk Exposure**

Galarza and Carter (2011) from their field experiment of risk preference and demand, for insurance in Peru found that insurance help to reduce the fear of losing the collateral that prevent potential borrowers from taking a loan. It also found that low and moderate risk aversion would stick to the safer projects

## **Trust**

Cole S. , et al. (2013)Trust is likely to be particularly relevant to demand for financial products in environment in which formal legal protections are weak. Author found that the strong consumer protection regulation that commits companies to honour their contract may help built the trust. Another finding is having a higher level of trust significantly increase the insurance take up. Trust has been the one of the most important determinants for micro insurance and financial product. For the study, the sample size of the survey is 1047 land owner household from Andra Pradesh and 1500 land owner house from Gujarat has been collected in the year 2006. Linear probability model has been used to identify the probability of household insurance purchase.

## **Enrolment in Health Insurance**

Enrolment is the time period each year when you're allowed to start, stop or change your health insurance plan. The only way you can enrol in a health plan through the Marketplace outside Open Enrolment is if you qualify for a Special Enrolment Period. You can find these plans through some insurance companies, agents, brokers, and online health insurance sellers.

## **Gender**

Gender refers to the characteristics of women, men, girls and boys that are socially constructed. Gender interacts with but is different from sex, which refers to the different biological and physiological characteristics of females, males and intersex persons, such as chromosomes, hormones and reproductive organs.

## **Age**

Age is defined as a span of years during which some event occurred. The definition of age is the number of years something has been alive or in existence. An example of age is being 16 years old.

## **Education**

Education is the process of facilitating learning, or the acquisition of knowledge, skills, values, morals, beliefs, and habits. Educational methods include teaching, training, storytelling, discussion and directed research.

**Income**

Income is money (or some equivalent value) that an individual or business receives, usually in exchange for providing a good or service or through investing capital. For individuals, income is most often received in the form of wages or salary.

**Marital Status**

The marital status is the civil status of each individual in relation to the marriage laws or customs of the country, i.e. never married, married, widowed and not remarried, divorced and not remarried, married but legally separated, de facto union.

## **CHAPTER III**

### **RESEARCH METHODS**

This chapter explains the methodology employed in this study. This chapter has been divided into five sections. First section provides a description of research design used in this study. Second section deals with the nature and source of data. Third section describes the population and sample for the purpose of study. Similarly, fourth section describes method of analysis including the empirical models. Fifth section explains the variables and their measurement criteria.

#### **3.1 Research Design**

This study has employed descriptive and analytical research design to deal with the fundamental issues associated with the consumers perceptions towards health insurance in the context of Nepal. The descriptive research design has been adopted for fact-finding and searching adequate information about the factors affecting consumer's perception in health insurance. This design has also been employed to assess the opinions, perceptions, and characteristics of respondents i.e. employees of NRB, commercial banks and academician with respect to consumers perception in health insurance.

Besides, an effort has also been made to describe the nature of data by using descriptive statistics with respect to variables such as income constraints, liquidity constraints, opportunity cost, status of information, and availability of subsidized government health care, linkage with government hospitals, risk exposure and trust. Moreover, this study depends on correlation research design in order to ascertain the directions and magnitudes of the correlation of the dependent variable i.e. enrollment in health insurance and the independent variables (income constraints, liquidity constraints, opportunity cost, status of information, and availability of subsidized government health care, linkage with government hospitals, risk exposure and trust).

Furthermore, this study has employed causal comparative research design in order to observe the direction, magnitudes, and relationship between consumers perception in health insurance related variables. So, it helps in analyzing the cause and effect and relationship among the different variables used for this study. This study describes and explores the consumer's perception on health insurance. This purpose has been fulfilled by examining the impact of income constraints, liquidity constraints, opportunity cost, status of information, and availability of subsidized government health care, linkage with

government hospitals, risk exposure and trust on health insurance. The basic purpose of employing causal comparative research design in this study is to understand and examine the relationship between the consumer's perception and health insurance. Other methodological issues associated with this study are dealt extensively in the respective sections.

### **3.2 Population and Sample**

The population of the study includes the employees of commercial banks and academicians, who have the knowledge of the consumers perception on health insurance . Van Voo Morgan (2007) suggested that, if the predictor is five or less than five, the number of participants exceeds the number of predictors by at least 50 for each predictors. The absolute minimum of 10 participants is appropriate for each predictor if the regression equation have six or more predictors. Moreover the researchers have the power to detect for small sample size by 30 participants per variables in the survey. In the study, there are total five predictor's variables. Therefore 150 sample size is appropriate for the survey. So, 200 questionnaires were distributed to the respondents to get reliable output.

For the purpose of the study, purposive judgmental sampling has been used. The judgment is made based on the experience and knowledge about the study among the policy makers, insurance policy implementers, and academicians. Purposive sampling (also known as judgment, selective or subjective sampling) is a sampling technique in which researcher relies on his or her own judgment when choosing members of population to participate in the study. This technique is essentially the process of taking the sample that have relevant knowledge and experience about the study.

The population of this study includes the respondents who are high level staff of commercial banks, and academicians due to the nature of the research. The respondents have been selected on the basis of their experience in the related field not less than two years

### **3.3 Data collection procedure**

Study is based on primary data. Primary data were collected through questionnaire survey. Likert scale based questionnaires are used, in this regard and some open-end questions are also taken as per requirement after taking permission from the health insurance clients, survey had been undertaken according to the schedule provided by the clients. After the suggestion of clients, the survey-based questionnaire had been carried out with the clients.

In addition to this, survey was also conducted in different health insurance clients who have done insurance in a regular basis.

### **3.4 Instrumentation (tools and techniques)**

In this study, questionnaires are developed to study the consumer's perception towards health insurance. Survey in the form of questionnaires was chosen for this research. Questionnaires are divided into two parts. In the first part, the respondents profile is asked such as occupation and monthly income. The second part comprise of 28 questions to measure independent and dependent variables. It contains only close-ended questions in order to create less time consuming when filling in the answer. All the close-ended questions are measured using 5-point scales anchored by 1 (strongly disagree) and 5 (strongly agree) to create an easy to answer and unbiased questionnaire. To measure the independent and dependent variables the questionnaires are divided into two parts. The variables measured were need for income constraints, liquidity constraints, opportunity cost, status of information, and availability of subsidized government health care, linkage with government hospitals, risk exposure and trust towards health insurance.

The questionnaires were designed to be completed in less than 10 minutes. Likert scale was used in this study to generate statistical measurements of cross buying intention of bank customers. A Likert scale is a scale commonly used in questionnaires, and is the most widely used scale in survey research. Respondents specify their level of agreement to a statement when responding to a Likert questionnaire item. The advantages of using Likert scale are obvious that they are easy to construct, administer and score.

After the questionnaire is completed, each item was analyzed separately or in some cases item responses are summed to create a score for a group of items. Hence, Likert scales are also known as summative scales. As in this study, a high score would indicate a favourable consumer's perception instrument towards performance and a low score an unfavourable. In this study a five point Likert scale was used as 1 (strongly disagree) and 5 (strongly agree).

### **3.5 Data analysis tools and model**

Primary data has been collected and evaluation is done from different prospective which would determine the exact factors affecting of group lending on repayment performance i.e. group default. Data were analyzed using SPSS. By using SPSS version 20, descriptive

statistics i.e. percentage, mean and standard deviation are calculated. The correlations and regression of variables are also analyzed using SPSS (V 20). Finally ANOVA test is carried out for hypothesis testing. Microsoft excels and statistical package for social sciences (SPSS V 20) computer programs are used to process and analyze the data collected.

### **3.5.1 Descriptive Statistics**

The study has used the summary of descriptive statistics associated with dependent and explanatory variables of sample to explain the variables during the sample period. Descriptive analytical tools like mean, median, standard deviation, minimum and maximum values, of different variables such as income constraints, liquidity constraints, opportunity cost, status of information, and availability of subsidized government health care, linkage with government hospitals, risk exposure and trust as well as health insurance been used to describe the determinants of consumers perceptions towards health insurance.

### **3.5.2 Correlation Analysis**

This study has also applied correlation analysis in descriptive research design. In this study, correlation analysis has been basically adopted to identify the direction and magnitude of relationship between different pairs of dependent variables and explanatory variables. It shows the movements of two variables and their association. The relationship has been explained by using bivariate Pearson correlation coefficient. The value of correlation coefficient ranges from  $-1$  to  $+1$ . If correlation coefficient is exactly  $-1$ , two variables are said to have perfect negative correlation as such that they move together exactly into opposite directions. On the other hand, if correlation coefficient is  $+1$ , the variables are said to be perfectly positively related.

### **3.5.3 Regression analysis**

Regression analysis is used to model the relationship between a response variable and one or more predictor variables. Regression analysis involves identifying the impact between a dependent variable and one or more independent variables. A model of the relationship is hypothesized, and estimates of the parameter values are used to develop an estimated regression equation. Various tests are then employed to determine if the model is satisfactory. If the model is deemed satisfactory, the estimated regression equation can be used to predict the value of the dependent variable given values for the independent variables.

**Bivariate regression models**

Bivariate regression analysis is a type of statistical analysis that can be used to evaluate the impact of independent variable on dependent variable. The two variables are frequently denoted as X and Y, with one being an independent variable (or explanatory variable), while the other is a dependent variable (or outcome variable). However these models of study have ten Independent Variables, such as income constraints, liquidity constraints, opportunity cost, status of information, and availability of subsidized government health care, linkage with government hospitals, risk exposure and trust and one dependent variable enrolment in health insurance. Therefore study has used simple linear regression. So the study regressed each independent variable with repayment performance. Linear regression is a way to model the relationship between two variables. The bivariate models used in the study are presented as follows:

$$EHI_t = \alpha + \beta_1 IC_t + U_t \dots\dots\dots (1)$$

$$EHI_t = \alpha + \beta_1 LC_t + U_t \dots\dots\dots (2)$$

$$EHI_t = \alpha + \beta_1 OC_t + U_t \dots\dots\dots (3)$$

$$EHI_t = \alpha + \beta_1 LI_t + U_t \dots\dots\dots (4)$$

$$EHI_t = \alpha + \beta_1 ASG_t + U_t \dots\dots\dots (5)$$

$$EHI_t = \alpha + \beta_1 LGH_t + U_t \dots\dots\dots (6)$$

$$EHI_t = \alpha + \beta_1 RE_t + U_t \dots\dots\dots (7)$$

$$EHI_t = \alpha + \beta_1 T_t + U_t \dots\dots\dots (8)$$

**Multivariate regression models**

Multivariate regression is a technique that estimates a single regression model with more than one outcome variable. When there is more than one predictor variable in a multivariate regression model, the model is a multivariate multiple regressions. The multivariate models used in the study is presented as follows:

$$EHI_t = \alpha + \beta_1 IC_t + \beta_2 LC_t + \beta_3 OC_t + \beta_4 LI_t + \beta_5 ASG_t + \beta_6 LGH_t + \beta_7 RE_t + \beta_8 T_t + U_t$$

Where, EHI= Enrollment in Health Insurance, IC= Income Constraint, LC= Liquidity Constraints, OC = opportunity cost, LI = Status of Information, ASG= availability of subsidized government health care, LGH= Linkage with Government health care, RE= Risk



Exposure, T= Trust,  $\alpha$ ,  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$ ,  $\beta_4$ ,  $\beta_5$ ,  $\beta_6$ ,  $\beta_7$  and  $\beta_8$  = Parameter, and  $U_t$  = error terms = normally, independently and identically distributed.

### 3.5.4 ANOVA Test

ANOVA is used to test the goodness of fit of regression line. It helps to identify the overall significance of the regression model.

### 3.5.5 Multicollinearity test

The assumption of multiple regressions is that, there should not be strong correlation between or among explanatory variables. To test the multicollinearity, the correlations among the variables are calculated.

## 3.6 Reliability

The reliability of the data for the study purpose and its findings were checked by using the statistical tool, SPSS using reliability analysis model. The reliability of study has been measured by using consistency and stability of the respondents' response in primary data. The major use of reliability coefficients is to communicate the repeatability of results. Statistically, Cronbach's alpha is a reliability coefficient of internal consistency. Cronbach's alpha is not a statistical test; it is a coefficient of reliability (or consistency). The coefficient of Cronbach's alpha varies from 0 to 1, and a value of 0.60 or less generally indicates unsatisfactory internal consistency reliability and a value of Cronbach's alpha in the range of .90 to .99 is considered excellent internal consistency reliability. The result was reliable and valid with Cronbach's Alpha i.e. 0.832 which is shown in table 3.1.

Table 3.1

### *Reliability Analysis*

Cronbach's Alpha	Number of Items
.832	28

## CHAPTER IV

### DATA ANALYSIS AND RESULTS

Chapter four deals with the systematic presentation, analysis and discussion of the finding of the primary data collected through questionnaire survey. Here the collected data are summarized and presented in tabulated form for the understanding and analysis purpose. The main aim of this chapter is to present the characteristic of the study variables and to interpret the result. This chapter also covers the test of hypothesis, which has been set in the chapter one. Each hypothesis is tested and analyzed to draw the conclusion. Various statistical and econometric model described in the chapter three have been used for the purposed. The data analysis was done through statistical technique like descriptive analysis, correlation analysis, structure of variables, regression analysis, statistical analysis, and other inferential analysis. A detail issue of findings from data analysis has been dealt in the respective sections.

#### 4.1 Descriptive results

##### 4.1.1 Demographic characteristics

This section explains the demographic characteristics of the respondents. In this section, the respondents profile has been analyzed in term of respondent's gender group, marital status, employment status, household size, income level and education. The demographic profile gives a picture of the classified information of the male and female respondents in term of the number and percentages.

The respondents profile along with their personal characteristics and results of the survey are presented in Table 4.1,

Table 4.1 reveals that the personal characteristics of respondents combined on the basis respondent's age group. Among the 200 respondents 9 percent of the respondents were below 20 years, 12.5 percent of the respondents fall under 20 to 30 years, 20 percent of the respondents were under 30 to 40 years, 48 percent of the respondents fall under 40 to 50 years and rest of the respondents were fall under 50 and above age group. Similarly, out of the total respondents, 29.5 percent of the total respondents were male and 70.5 percent were female. On the other hand, out of the total respondents 24 percent were single, 58 percent were married, 6 percent were divorced and 12 percent were widow.

Among the 200 respondent 35.5 percentage of the respondent were employed, 30 percent were unemployed and 34.5 were self-employed. Similarly, 6 percent of the respondents contain 2 members, 35.5 percent of the respondents were provided with 3 members, 44.5 percent were provided with 4 members and 14 percent of the respondents contain more than 4 members. On the other hand, 25 percent of the respondent earn less than 20000, 18.5 percent of the respondents earn between 20000 to 40000, 36 percent of the respondents earn 40000 to 60000 and 20.5 percent earn more than 60000. Out of the total respondents, 10 percent were illiterate being unable to read and write, 60 percent of the respondents were considered literate having primary and lower secondary degree and 30 percent of the respondents earned secondary and higher secondary degree.

Table 4.1

*Demographic characteristics of respondents*

	Characteristics	Number	Percentage
Age	Below 20 years	18	9
	20 to 30 years	25	12.5
	30 to 40 years	40	20
	40 to 50 years	96	48
	50 and above	21	10.5
Gender	Male	59	29.5
	Female	141	70.5
Marital Status	Single	48	24
	Married	116	58
	Divorced	12	6
	Widowed	24	12
Employee Status	Employed	71	35.5
	Unemployed	60	30
	Self Employed	69	34.5
Household Size	2	12	6
	3	71	35.5
	4	89	44.5

	More than 4	28	14
Income Level	Below 20000	50	25
	20001 to 40000	37	18.5
	40001 to 60000	72	36
	60001 and above	41	20.5
	Education Degree	Illiterate	20
	Literate	120	60
	Secondary and Higher		
	Secondary	60	30
Age of the Group	Below 6 months	34	17
	6 months to 1 year	54	27
	Above 1 year	112	56

Source: *Survey (2021)*

Table 4.2

*Descriptive Statistics*

	N	Minimum	Maximum	Mean	Std. Deviation
IC	200	1.0	5.0	4.738	1.0802
LC	200	1.0	5.0	4.162	1.2067
OC	200	1.0	5.0	4.457	1.0491
LI	200	1.0	5.0	4.650	1.1613
ASG	200	1.0	5.0	4.214	1.2022
LGH	200	1.0	5.0	4.090	1.3853
RE	200	1.0	5.0	4.200	1.3004
T	200	1.0	5.0	3.640	1.4512

Source: *Survey (2021)*

As this study has employed descriptive research design, among others, descriptive statistics have been used to describe the characteristics of different variables of customer's

perception on health insurance. The descriptive statistics used in this study consists of mean, standard deviation, and minimum and maximum values associated with variables under consideration. Table 4.2 reveals descriptive statistics of different variables associated with consumer's perception on health insurance in Nepal with 200 observations for the period. The table indicates the descriptive statistics of the consumer's perception on health insurance. The average value of income constraints is 4.738 with the standard deviation of 1.0802 with the maximum value of 5 and minimum value of 1. In addition, the minimum and maximum value of the liquidity constraint is 1 and 5 respectively with the mean value of liquidity constraint is 4.162 and the standard deviation of 1.2067. The average value of same opportunity cost is 4.457 with the standard deviation of 1.0491 having the maximum value of 5 and minimum value of 1.

Likewise, the minimum and maximum value of the status of information is 1 to 5 respectively with mean value of status of information is 4.650 and the standard deviation of 1.1613. The mean value of availability of subsidized government health care is 4.214 with the standard deviation of 1.2022 having the minimum value 1 and maximum value of 5. Similarly, the minimum and maximum value of the Linkage with Government health care is 1 to 5 respectively with mean value of Linkage with Government health care is 4.090 and the standard deviation of 1.3853. Similarly, the minimum and maximum value of the risk exposure is 1 to 5 respectively with mean value of risk exposure is 4.200 and the standard deviation of 1.3004. Similarly, the minimum and maximum value of the client trust is 1 to 5 respectively with mean value of client trust is 3.640 and the standard deviation of 1.4512.

## **4.2 Correlation Analysis**

Enrolment of health insurance has been used as the proxy for the consumers perception which is dependent variable and income constraints, liquidity constraints, opportunity cost, status of information, and availability of subsidized government health care, linkage with government hospitals, risk exposure and trust are the explanatory variables used in this study. Therefore, it is reasonable to expect some kind of statistically significant relationship among these pairs of variables. This section therefore is devoted to explaining the direction and magnitude of relationship among different pairs of these variables. The correlation analysis has been performed for this purpose.

#### 4.2.1 Income Constraint

Table 4.3 Shows the Pearson correlation of dependent variable enrolment of health insurance and explanatory variable, income constraints. It reveals that there is significant relationship between income constraints and enrolment of health insurance at the significance level of 0.01 because the P- value is less than the alpha i.e.  $0.006 < 0.01$ . Also, the Pearson correlation value between the variable is 0.192, which shows that there is positive correlation between income constraints and enrolment of health insurance. Hence, an income constraint has a significant role over enrolment of health insurance.

Table 4.3

*Correlations of each independent variables with EHI*

Variables	Coefficient with EHI	P- Value	Significance
IC	0.192***	0.006	Significant
LC	0.587***	0.000	Significant
OC	-0.093	0.190	No Significant
SLI	0.393***	0.000	Significant
ASG	1.44**	0.041	Significant
LGH	0.78***	0.000	Significant
RE	0.27***	0.000	Significant
T	0.55	0.000	Significant

\*\*\* indicate significant at 1 percent significance level

\*\* indicate significant at 5 percent significance level

\*\* indicate significant at 10 percent significance level

#### 4.2.2 Liquidity Constraints

Table 4.3 Shows the Pearson correlation of dependent variable enrolment of health insurance and explanatory variable, liquidity constraints. It reveals that there is significant relationship between liquidity constraints and enrolment of health insurance at the significance level of 0.01 because the P- value is less than the alpha i.e.  $0.000 < 0.01$ . Also,

the Pearson correlation value between the variable is 0.587, which shows that there is positive correlation between liquidity constraints and enrolment of health insurance. Hence, liquidity constraint has a significant role over enrolment of health insurance.

#### **4.2.3 Opportunity Cost**

Table 4.3 Shows the Pearson correlation of dependent variable enrolment of health insurance and explanatory variable opportunity cost. It reveals that there is no significant relationship between enrolment of health insurance and opportunity cost at the significance level of 1%, 5% and 10% because the P- value is greater than the alpha i.e.  $0.190 > 0.01$ ,  $0.05$  and  $0.10$ . Also, the Pearson correlation value between the variable is  $-0.093$ , which shows that there is negative correlation between enrolment of health insurance and opportunity cost. Hence opportunity cost has an insignificant role over enrolment of health insurance.

#### **4.2.4 Status of Information**

Table 4.3 Shows the Pearson correlation of dependent variable enrolment of health insurance and explanatory variable, status of information. It reveals that there is significant relationship between status of information and enrolment of health insurance at the significance level of 0.01 because the P- value is less than the alpha i.e.  $0.000 < 0.001$ . Also, the Pearson correlation value between the variable is 0.393, which shows that there is positive correlation between status of information and enrolment of health insurance. Hence, status of information has a significant role enrolment of health insurance

#### **4.2.5 Availability of Government subsidy**

Table 4.3 Shows the Pearson correlation of dependent variable enrolment of health insurance and explanatory variable, availability of government subsidy. It reveals that there is significant relationship between availability of government subsidy and enrolment of health insurance at the significance level of 0.05 because the P- value is less than the alpha i.e.  $0.041 < 0.05$ . Also, the Pearson correlation value between the variable is 0.144, which shows that there is positive correlation between availability of government subsidy and enrolment of health insurance. Hence, availability of government subsidy has a significant role over enrolment of health insurance.

#### **4.2.6 Linkage with government health care**

Table 4.3 Shows the Pearson correlation of dependent variable linkage with government health care and explanatory variable, enrolment of health insurance. It reveals that there is significant relationship between linkage with government health care and enrolment of health insurance at the significance level of 0.01 because the P- value is less than the alpha i.e.  $0.000 < 0.1$ . Also, the Pearson correlation value between the variable is 0.78, which shows that there is positive correlation between linkage with government health care and enrolment of health insurance. Hence, linkage with government health care has a significant role over enrolment of health insurance.

#### **4.2.7 Risk Exposure**

Table 4.3 Shows the Pearson correlation of dependent variable enrolment of health insurance and explanatory variable, risk exposure. It reveals that there is significant relationship between risk exposure and enrolment of health insurance at the significance level of 0.01 because the P- value is less than the alpha i.e.  $0.000 < 0.1$ . Also, the Pearson correlation value between the variable is 0.27, which shows that there is positive correlation between risk exposure and enrolment of health insurance. Hence, risk exposure has a significant role over enrolment of health insurance.

#### **4.2.8 Trust**

Table 4.3 Shows the Pearson correlation of dependent variable enrolment of health insurance and explanatory variable, clients trust. It reveals that there is significant relationship between client trust and enrolment of health insurance at the significance level of 0.01 because the P- value is less than the alpha i.e.  $0.000 < 0.1$ . Also, the Pearson correlation value between the variable is 0.55, which shows that there is positive correlation between client trust and enrolment of health insurance. Hence, client trust has a significant role over enrolment of health insurance.

### **4.3 Analysis of Regression Results**

In order to test the statistical significance and robustness of the results, this study relies on primary data analysis based on regression model specified in chapter three. It basically deals with regression results from various specifications of the model to examine the direction and strength of relationship between consumer perceptions on health insurance that include 200 observations during the period. The multiple regression analysis has been



done in order to investigate the relationship between consumer perceptions on health insurance. Income constraints, liquidity constraints, opportunity cost, status of information, and availability of subsidized government health care, linkage with government hospitals, risk exposure and trust have been used as the variables of consumer's perception whereas enrolment of health care is used as proxy for the health insurance. In this section, an attempt also has been made to test the validity of the model through statistical test of significance such as t-test, F-test, adjusted coefficient of determination (Adj. R<sup>2</sup>), autocorrelation and multicollinearity.

In table 4.4, the model 1 examines the impact of income constraints on enrolment of health care. It shows that income constraints have the positive impact on enrolment of health care i.e. health insurance. The 1- unit increases in income constraints impact on enrolment of health care by 2.757 units. The R- square value is 0.471, it means that 47.1 percent enrolment of health care is explained by income constraints; the other variation is explained by other independent variables. Therefore, the conclusion from the analysis is that, the income constraint has significant positive impact on enrolment of health care i.e. health insurance.

In table 4.4, the model 2 examines the impact of liquidity constraints on enrolment of health care. It shows that liquidity constraints have the positive impact on enrolment of health care i.e. health insurance. The 1- unit increases in liquidity constraints impact on enrolment of health care by 10.203 units. The R- square value is 0.784, it means that 78.4 percent enrolment of health care is explained by liquidity constraint; the other variation is explained by other independent variables. Therefore, the conclusion from the analysis is that, the liquidity constraint has significant positive impact enrolment of health care i.e. health insurance.

Table 4.4

*Bivariate Regression*

Model	Constant	IC	LC	OC	SLI	ASG	R-Square	F-statistics	Sig.
1	12.654*** (0.000)	2.757*** (0.006)					0.471	7.601	0.006
2	13.503*** (0.000)		10.203*** (0.000)				0.784	104.094	0
3	161.870*** (0.000)			1.314 (0.190)			0.84	1.727	0.19
4	12.011*** (0.000)				6.023*** (0.000)		0.685	36.271	0
5	16.810*** (0.606)					2.052** (0.004)	0.824	4.211	0.041

Model	Constant	LGH	RE	T	R-Square	F-statistics	Sig.	
6	20.755*** (0.000)	-1.104 *** (0.000)				0.6	1.22	0.271
7	19.677*** (0.000)		3.385*** (0.000)		0.484	14.81	0.701	
8	24.404*** (0.000)			7.820 (0.435)	0.82	6.11	0.435	

\*\*\* indicate significant at 1 percent significance level

\*\* indicate significant at 5 percent significance level

\*indicate significant at 10 percent significance level

In table 4.4, the model 3 examines the impact of opportunity cost on enrolment of health care. It shows that opportunity cost has the positive but insignificant impact on enrolment of health care i.e. health insurance. The 1- unit increases in opportunity cost impact on enrolment of health care by 1.314 units. The p- value is 0.190, which is not significant on significance level 1 percent, 5 percent and 10 percent. The R- square value is 0.84, it means that 84 percent enrolment of health care is explained by opportunity cost; the other variation is explained by other independent variables. Therefore, the conclusion from the analysis is that, the opportunity cost has insignificant positive impact on enrolment of health care i.e. health insurance.

In table 4.4, the model 4 examines the impact of status of information on enrolment of health care. It shows that status of information have the positive impact on enrolment of health care i.e. health insurance. The 1- unit increases in status of information impact on enrolment of health care by 6.023 units. The R- square value is 0.685, it means that 68.5 percent enrolment of health care is explained by status of information; the other variation is explained by other independent variables. Therefore, the conclusion from the analysis is that, the status of information has significant positive impact on enrolment of health care i.e. health insurance.

In table 4.4, the model 5 examines the impact of availability of government subsidy on enrolment of health care. It shows that availability of government subsidy have the positive impact on enrolment of health care i.e. health insurance. The 1- unit increases in availability of government subsidy impact on enrolment of health care by 2.052 units. The R- square value is 0.824, it means that 82.4 percent enrolment of health care is explained by availability of government subsidy; the other variation is explained by other independent variables. Therefore, the conclusion from the analysis is that, the availability of government subsidy has significant positive impact on enrolment of health care i.e. health insurance.

In table 4.4, the model 6 examines the impact of linkage with government health care on enrolment of health care. It shows that linkage with government health care have the negative but significant impact on enrolment of health care i.e. health insurance. The 1- unit increases in linkage with government health care impact on enrolment of health care by 1.104 units. The R- square value is 0.60, it means that 60 percent enrolment of health care is explained by linkage with government health care; the other variation is explained by other independent variables. Therefore, the conclusion from the analysis is that, the linkage

with government health care has significant negative impact on enrolment of health care i.e. health insurance.

In table 4.4, the model 7 examines the impact of risk exposure on enrolment of health care. It shows that risk exposure have the positive impact on enrolment of health care i.e. health insurance. The 1- unit increases in risk exposure impact on enrolment of health care by 3.385 units. The R- square value is 0.484, it means that 48.4 percent enrolment of health care is explained by risk exposure; the other variation is explained by other independent variables. Therefore, the conclusion from the analysis is that, the risk exposure has significant positive impact on enrolment of health care i.e. health insurance.

In table 4.4, the model 8 examines the impact of trust on enrolment of health care. It shows that trust has the positive but insignificant impact on enrolment of health care i.e. health insurance. The 1- unit increases in trust impact on enrolment of health care by 7.820 units. The p- value is 0.435, which is not significant on significance level 1 percent, 5 percent and 10 percent. The R- square value is 0.82, it means that 82 percent enrolment of health care is explained by trust; the other variation is explained by other independent variables. Therefore, the conclusion from the analysis is that, the trust has insignificant positive impact on enrolment of health care i.e. health insurance.

Table 4.5

*Summary Output of Multivariate Regression Model*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig. F Change
1	.746 <sup>a</sup>	.757	.536	.6448	.000

a. Predictors: (Constant), IC, LC, OC, SLI, ASG, LGH, RE, T

b. Dependent Variable: EHI

Table 4.5 shows that the value of adjusted R square of the regression model is 0.757 which means that about 75.7 percent variation in enrolment of health care is explained by the regression equation involving eight explanatory variables Income constraints, liquidity constraints, opportunity cost, status of information, and availability of subsidized government health care, linkage with government hospitals, risk exposure and trust. This implies strong explanatory power for the whole regression. The model is significant as indicated by p-value of 0.000 which is less than 0.01. The value of Durbin- Watson test for

dependent variable in the model is 1.296, which indicates that there is no autocorrelation exists in our analysis and the regression models assume that the error deviations are uncorrelated.

Table 4.6

*Analysis of Variance (ANOVA)*

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	99.189	9	11.021	26.504	.000 <sup>b</sup>
	Residual	79.006	190	.416		
	Total	178.195	199			

a. Predictors: (Constant), IC, LC, OC, SLI, ASG, LGH, RE, T

b. Dependent Variable: EHI

Table 4.6, shows the overall significance level of the regression model. It shows the goodness of fit of regression equation. The above ANOVA test shows that there is overall significance of the regression model. The total sum of square deviation of the observations is 178.195, in which the explained sum of square is 99.189 and the residual sum of square is 79.006. The total degree of freedom in ANOVA test is 199.

#### **4.4 Multicollinearity test**

Multicollinearity is a common problem when estimating linear or generalized linear models. It occurs when there are high correlations among predictor variables, leading to unreliable and unstable estimates of regression coefficients. The assumption for Ordinary Least Square regression analysis is that there should not be multicollinearity among the explanatory variables. The rule of thumb of correlation coefficient result is that, there should be correlation value less than 0.70 for no multicollinearity among the explanatory variable

Table 4.7

*Multicollinearity test*

	IC	LC	OC	SLI	ASG	LGH	RE	T
IC	1							
LC	-.051 (.474)	1						
OC	-.006 (.432)	-.051 (.471)	1					
SLI	.037 (.603)	.100 (.157)	-.057 (.425)	1				
ASG	.097 (.173)	-.079 (.265)	-.077 (.279)	-.001 (.386)	1			
LGH	.092 (.193)	-.025 (.522)	.050 (.482)	.024 (.432)	.006 (.238)	1		
RE	-.022 (.355)	.050 (.484)	-.006 (.234)	.100 (.160)	-.066 (.353)	.002 (.380)	1	
T	-.068 (.340)	-.027 (.601)	-.096 (.175)	-.023 (.447)	-.083 (.244)	-.014 (.339)	-.068 (.342)	1

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\*. Correlation is significant at the 0.01 level (2-tailed).

To identify the assumption of OLS, the study deals with the correlation coefficient among the explanatory variables, and identify whether there is multicollinearity or not in each explanatory variable. The values of correlation lies above and below the value i.e. 0.70. For the regression analysis, the explanatory variables having correlation coefficient is less than 0.70, are taken as explanatory variables of the model. The correlation coefficient value greater than 0.70 is not use in the model. Here, the correlation coefficient of all the variables is less than 0.70. So, this all the explanatory variables are suitable to take in the model, because they are free from multicollinearity.

Table 4.8

*Result of hypothesis tests*

S. No.	Alternative Hypothesis	Tools/ Method	Accept/ reject
1	H1: There is a significant impact of income constraints on enrolment of health care i.e. health insurance	Bivariate regression	Accept
2	H2: There is a significant impact of liquidity constraints on enrolment of health care i.e. health insurance	Bivariate regression	Accept
3	H3: There is a significant impact of opportunity cost on enrolment of health care i.e. health insurance	Bivariate regression	Reject
4	H4: There is a significant impact of status of information on enrolment of health care i.e. health insurance	Bivariate regression	Accept
5	H5: There is a significant impact of availability of government subsidy on enrolment of health care i.e. health insurance	Bivariate regression	Accept
6	H6: There is a significant impact of linkage with government health care on enrolment of health care i.e. health insurance	Bivariate regression	Accept
7	H7: There is a significant impact of risk exposure on enrolment of health care i.e. health insurance	Bivariate regression	Accept
8	H8: There is a significant impact of trust on enrolment of health care i.e. health insurance	Bivariate regression	Reject

## 4.5 Summary of Findings and Discussions

1. The average value of income constraints is 4.738 with the standard deviation of 1.0802 with the maximum value of 5 and minimum value of 1. In addition, the minimum and maximum value of the liquidity constraint is 1 and 5 respectively with the mean value of liquidity constraint is 4.162 and the standard deviation of 1.2067.
2. The average value of same opportunity cost is 4.457 with the standard deviation of 1.0491 having the maximum value of 5 and minimum value of 1. Likewise, the minimum and maximum value of the status of information is 1 to 5 respectively with mean value of status of information is 4.650 and the standard deviation of 1.1613.
3. The mean value of availability of subsidized government health care is 4.214 with the standard deviation of 1.2022 having the minimum value 1 and maximum value of 5. Similarly, the minimum and maximum value of the Linkage with Government health care is 1 to 5 respectively with mean value of Linkage with Government health care is 4.090 and the standard deviation of 1.3853.
4. The minimum and maximum value of the risk exposure is 1 to 5 respectively with mean value of risk exposure is 4.200 and the standard deviation of 1.3004. Similarly, the minimum and maximum value of the client trust is 1 to 5 respectively with mean value of client trust is 3.640 and the standard deviation of 1.4512.
5. There is significant relationship between income constraints and enrolment of health insurance at the significance level of 0.01 because the P- value is less than the alpha i.e.  $0.006 < 0.01$ . Also, the Pearson correlation value between the variable is 0.192, which shows that there is positive correlation between income constraints and enrolment of health insurance. Hence, an income constraint has a significant role over enrolment of health insurance.
6. There is significant relationship between liquidity constraints and enrolment of health insurance at the significance level of 0.01 because the P- value is less than the alpha i.e.  $0.000 < 0.01$ . Also, the Pearson correlation value between the variable is 0.587, which shows that there is positive correlation between liquidity constraints and enrolment of health insurance. Hence, liquidity constraint has a significant role over enrolment of health insurance.
7. There is no significant relationship between enrolment of health insurance and opportunity cost at the significance level of 1%, 5% and 10% because the P- value is greater than the alpha i.e.  $0.190 > 0.01, 0.05$  and  $0.10$ . Also, the Pearson correlation value between the variable is -0.093, which shows that there is negative correlation between



enrolment of health insurance and opportunity cost. Hence opportunity cost has an insignificant role over enrolment of health insurance.

8. There is significant relationship between status of information and enrolment of health insurance at the significance level of 0.01 because the P- value is less than the alpha i.e.  $0.000 < 0.001$ . Also, the Pearson correlation value between the variable is 0.393, which shows that there is positive correlation between status of information and enrolment of health insurance. Hence, status of information has a significant role enrolment of health insurance.

9. There is significant relationship between availability of government subsidy and enrolment of health insurance at the significance level of 0.05 because the P- value is less than the alpha i.e.  $0.041 < 0.05$ . Also, the Pearson correlation value between the variable is 0.144, which shows that there is positive correlation between availability of government subsidy and enrolment of health insurance. Hence, availability of government subsidy has a significant role over enrolment of health insurance.

10. There is significant relationship between linkage with government health care and enrolment of health insurance at the significance level of 0.01 because the P- value is less than the alpha i.e.  $0.000 < 0.1$ . Also, the Pearson correlation value between the variable is 0.78, which shows that there is positive correlation between linkage with government health care and enrolment of health insurance. Hence, linkage with government health care has a significant role over enrolment of health insurance.

11. There is significant relationship between risk exposure and enrolment of health insurance at the significance level of 0.01 because the P- value is less than the alpha i.e.  $0.000 < 0.1$ . Also, the Pearson correlation value between the variable is 0.27, which shows that there is positive correlation between risk exposure and enrolment of health insurance. Hence, risk exposure has a significant role over enrolment of health insurance.

12. There is significant relationship between client trust and enrolment of health insurance at the significance level of 0.01 because the P- value is less than the alpha i.e.  $0.000 < 0.1$ . Also, the Pearson correlation value between the variable is 0.55, which shows that there is positive correlation between client trust and enrolment of health insurance. Hence, client trust has a significant role over enrolment of health insurance.

13. Income constraints have the positive impact on enrolment of health care i.e. health insurance. The 1- point increases in income constraints impact on enrolment of health care by 2.757 times. The R- square value is 0.471, it means that 47.1 percent enrolment of health care is explained by income constraints; the other variation is explained by other

independent variables. Therefore, the conclusion from the analysis is that, the income constraint has significant positive impact on enrolment of health care i.e. health insurance.

14. Liquidity constraints have the positive impact on enrolment of health care i.e. health insurance. The 1- point increases in liquidity constraints impact on enrolment of health care by 10.203 times. The R- square value is 0.784, it means that 78.4 percent enrolment of health care is explained by liquidity constraint; the other variation is explained by other independent variables. Therefore, the conclusion from the analysis is that, the liquidity constraint has significant positive impact enrolment of health care i.e. health insurance.

15. Opportunity cost has the positive but insignificant impact on enrolment of health care i.e. health insurance. The 1- point increases in opportunity cost impact on enrolment of health care by 1.314 times. The p- value is 0.190, which is not significant on significance level 1 percent, 5 percent and 10 percent. The R- square value is 0.84, it means that 84 percent enrolment of health care is explained by opportunity cost; the other variation is explained by other independent variables. Therefore, the conclusion from the analysis is that, the opportunity cost has insignificant positive impact on enrolment of health care i.e. health insurance.

16. Status of information have the positive impact on enrolment of health care i.e. health insurance. The 1- point increases in status of information impact on enrolment of health care by 6.023 times. The R- square value is 0.685, it means that 68.5 percent enrolment of health care is explained by status of information; the other variation is explained by other independent variables. Therefore, the conclusion from the analysis is that, the status of information has significant positive impact on enrolment of health care i.e. health insurance.

17. Availability of government subsidy have the positive impact on enrolment of health care i.e. health insurance. The 1- point increases in availability of government subsidy impact on enrolment of health care by 2.052 times. The R- square value is 0.824, it means that 82.4 percent enrolment of health care is explained by availability of government subsidy; the other variation is explained by other independent variables. Therefore, the conclusion from the analysis is that, the availability of government subsidy has significant positive impact on enrolment of health care i.e. health insurance.

18. Linkage with government health care have the negative but significant impact on enrolment of health care i.e. health insurance. The 1- point increases in linkage with government health care impact on enrolment of health care by 1.104 times. The R- square value is 0.60, it means that 60 percent enrolment of health care is explained by linkage

with government health care; the other variation is explained by other independent variables. Therefore, the conclusion from the analysis is that, the linkage with government health care has significant negative impact on enrolment of health care i.e. health insurance.

19. Risk exposure have the positive impact on enrolment of health care i.e. health insurance. The 1- point increases in risk exposure impact on enrolment of health care by 3.385 times. The R- square value is 0.484, it means that 48.4 percent enrolment of health care is explained by risk exposure; the other variation is explained by other independent variables. Therefore, the conclusion from the analysis is that, the risk exposure has significant positive impact on enrolment of health care i.e. health insurance.

20. Trust has the positive but insignificant impact on enrolment of health care i.e. health insurance. The 1- point increases in trust impact on enrolment of health care by 7.820 times. The p- value is 0.435, which is not significant on significance level 1 percent, 5 percent and 10 percent. The R- square value is 0.82, it means that 82 percent enrolment of health care is explained by trust; the other variation is explained by other independent variables. Therefore, the conclusion from the analysis is that, the trust has insignificant positive impact on enrolment of health care i.e. health insurance.

## CHAPTER V

### DISCUSSION, CONCLUSION AND IMPLICATION

This chapter presents the discussion of the results and findings which has been obtained from data analysis, conclusion and implications that could be drawn from the study. The chapter has been divided into three segments. The first segment is driven towards discussing which involves comparison of the findings of this study and to give answer for the research question to meet the objective of the research. Likewise, the conclusion is drawn in the second segment from the result obtained from the data analysis inferred in the study whereas an implication of the study is in the third segment.

#### 5.1 Discussion

The general objective of the study is to identify the consumer's perception on health insurance of Nepal. A number of hypotheses examined the relationship of different variables that could affect the repayment performance in Nepal. (Guttman,2007) argued that, Poor borrowers in developing countries generally status collateral that can be used to guarantee their loans, and lenders often status the means to use the legal system to enforce repayment whereas, to understand the impact of the principle of income impact on insurance decision Besley & Coate (1995) developed a model of health insurance. They theoretically demonstrated interdependence between borrowers by specifying a cost to represent health insurance. In this connection they considered two countervailing incentive effects. The study concluded that, there is a significant positive relationship between incomes of clients on health insurance.

Similarly, Besley and Coate (1995) jointly demonstrated that under the government subsidy will be increase if at least one clients a return in excess of the amount to be paid by the government. It may be repaid if government provide the subsidy, the health insurance number increased. Researchers also theoretically proved that information has an advantage over individual health insurance in terms of higher knowledge when insurance premium are low. They also demonstrated that if risk exposure is high, the superiority of group to health insurance in terms of insurance premium is guaranteed. They tested the proposition that with risk exposure the premium will be increases with the increase in risk.

Likewise, (Jaina & Mansuri, 2003) argued that, the problem is serious in the sense that it ultimately increases the liquidity ratio of the clients and eventually crowds out

safer borrower by paying high premium but Armendáriz and Morduch (2007) theoretically demonstrate the role of paying high premium mechanism in case of high liquidity, the problem of adverse selection. For theoretical simplification, clients are distinguished as safe and risky clients. With joint liability the process of matching means that risky clients can pay back their premium more often than they could if just dealing with the bank as individual.

Stiglitz (1990) in significant early work demonstrated how peer monitoring mitigates the problem of ex ante moral hazard. Introducing the concept of peer monitoring in group clients, he argued that group clients programme may circumvents ex-ante moral hazard by way of paying excess premium of the group and impose penalties upon the risky clients. Moreover in group premium ex-post moral hazard can also be mitigated by way of peer monitoring.

Similarly, Bond and Rai, (2009) argued that health insurance should rely on government fund or enough start-up capital so as to maintain credibility of health insurance company. Financial self-sufficiency or liquidity can solve the problem, because making utilization of sufficient fund increase the opportunity profit. Besley and Coate (1995) concluded that, groups also have a comparative advantage in the enforcement of health insurance premium. While the formal insurance company has usually limited options to compel repayment from delinquent clients, group members can potentially employ sufficient premium or liquidity for health security.

## **5.2 Conclusion**

The purpose of this study was to identify the consumer's perceptions on health insurance in Nepal. Clients of Kathmandu Valley have been chosen as sample for the study to know the consumer's perceptions on health insurance in Nepal.

The factors that were identified as the explanatory variable were income constraints, liquidity constraints, opportunity cost, status of information, and availability of subsidized government health care, linkage with government hospitals, risk exposure and trust. These all variables were examined and compared with dependent variables of enrolment in health insurance.

Considering all the variables, i.e. income constraints, liquidity constraints, status of information, availability of government subsidy and risk exposure have the significance

impact on group default i.e. repayment performance of micro finance client. Therefore, these explanatory variables play an important role in analyzing consumer's perceptions on health insurance in Nepal. But, the explanatory variables; opportunity cost and trust have no significant impact on enrolment of health care i.e. health insurance of Nepal. Hence, they do not play an important role in the performance of enrolment of health care i.e. health insurance of clients.

Similarly, considering all the variables, i.e. were income constraints, liquidity constraints, status of information, linkage with government health care, and risk exposure have the significance positive relationship on enrolment of health care i.e. health insurance in Nepal. Therefore, these explanatory variables play an important role in the performance of health insurance of Nepal. Similarly, availability of government subsidy has the significant positive relationship with enrolment of health care i.e. health insurance in Nepal. But, the explanatory variables opportunity cost have negative but no significant relationship on enrolment of health care i.e. health insurance in Nepal. Whereas, trust has the positive but no significant relationship on enrolment of health care i.e. health insurance in Nepal. Hence, this do not play an important role in the performance of enrolment of health care i.e. health insurance in Nepal.

Similarly, the results were also conducted by primary study. In the study, the maximum respondents believed that, there is high impact of income of the clients and available information on enrolment of health care i.e. health insurance in Nepal while slightly low impact of risk exposure on enrolment of health care i.e. health insurance in Nepal. Likewise, majority of respondents believed that, there is a neutral impact of all the variables on enrolment of health care i.e. health insurance in Nepal.

Finally, expect two explanatory variables i.e. opportunity cost and trust, other explanatory variables i.e. income constraints, liquidity constraints, status of information, availability of government subsidy, linkage with government health care and risk exposure have significant impact with the enrolment of health care i.e. health insurance in Nepal. Therefore, they play an important role in the enrolment of health care i.e. health insurance in Nepal.

### **5.3 Implication**

The study results may provide a useful reference document to health insurance practitioners, experts, policy makers and scholars. The findings of the study might be helpful to Health Insurance Company in developing overall client management. The study is one of the latest topics in case Nepalese financial market because of health insurance being in its early stage. Thus, this study has attempted to open door to investigate further in the arena of different variables like loan duration, same education, loan size, outreach, experience of credit office and many other variables regarding health insurance. In this study, only limited health insurance has been selected. There is a lot of space for further research on other financial institutions like, cooperatives; several MFIs.

Findings from the study can be used to fix the duration for the approval of health insurance and level of flexibility to recover the premium amount. The managers and health insurance can use the findings relevant in controlling the beliefs of health insurance clients with the help of predicting variables like institutional and economic .For this; practitioners can focus on skills development trainings to clients on regular basis to increase their ROA and monthly income.

Though there had been few research regarding repayment performance of group based health insurance program outside Nepal, it is highly unsearched from clients and institutional perspective in Nepalese context. Therefore, this study has attempted to open door to investigate further in the field of determinants regarding the consumer's perceptions on health insurance. Researchers and scholars can also use this study to build on the existing literature on health insurance client's payment behavior and its significant variables. The findings of this study can used as a source of reference and as a basis for further research to those interested in this area or other related topics. The study will provide background information to other researchers or scholars who would like to investigate more on factors contributing to client's attitude towards health insurance clients. The finding will further provide secondary material for student in insurance and will encourage and motivate on diverse issues on clients of health insurance.

There has been number of studies about the determinants of group lending on repayment performance in case of other countries but very few in the context of Nepal. Hence, this research gives the insight about the determinants of group lending on repayment performance in context of Nepal. The study also gives the valuable suggestions to the researchers, to think about the variables that are to be taken for the study. Because, some variables used for the study may not have any implication. This research provides

supporting roles for the future studies that can be carried out by selecting other financial institutions also like development banks, and finance companies to grab more evidence about the determinants of group lending on repayment performance.

Finally, the present study is conducted in a place called Kathmandu Valley. All of respondents are from Kathmandu. There is a need for future research to replicate and extend the existing study to other contexts. Replication and extension of existing study to investigate respondents in various areas and countries with different cultures are required for the results to be generalized across different places.



## References

- Anderson, D. R., & Nevin, J. R. (1975). Determinants of young marrieds' life insurance purchasing behavior: An empirical investigation. *Journal of Risk and Insurance*, 375-387.
- Armendariz, & Morduch, J., B. (2005). *The economics of microfinance*. mit Press.
- Armendáriz de Aghion, B., & Morduch, J. (2007). Microfinance beyond group lending. *Economics of transition*, 8 (2), 401-420.
- Arun, T., Bendig, M., & Arun, S. (2012). Bequest motives and determinants of micro life insurance in Sri Lanka. *World development*, 40(8), 1700-1711.
- Asmare, A., & Worku, A. (2018). Determinants of Micro-Insurance Demand in Jimma Zone. *International Research Journal of Business Studies*, 11(3), 145-157.
- Bassem, B. S. (2008). Efficiency of microfinance institutions in the Mediterranean: an application of DEA. *Transition Studies Review*, 15 (2), 343-354.
- Bendig, M., & Arun, T. G. (2011). Enrolment in micro life and health insurance: Evidences from Sri Lanka.
- Berekson, L. L. (1973). Birth order, anxiety, affiliation and the purchase of life insurance. *Journal of Risk and Insurance*, 93-108.
- Berger, L. (2018). *Study on the Microinsurance Industry in Nepal*. Kathmandu: Sakchyam Access to Finance.
- Besley, T., & Coate, S. (1995). Group lending, repayment incentives and social collateral. *Journal of development economics*, 46 (1), 1-18.
- Bhatt, N. (2001). Delivering microfinance in developing countries: Controversies and policy perspectives. *Policy studies journal*, 29(2), 319-333.
- Bond, P., & Rai, A. S. (2009). Borrower runs. *Journal of development Economics*, 88 (2), 185-191.

- Cai, H., Chen, Y., Fang, H., & Zhou, L. A. (2009). *Microinsurance, trust and economic development: Evidence from a randomized natural field experiment* (No. w15396). National Bureau of Economic Research.
- Cao, Y., & Zhang, Y. (2011). Hog insurance adoption and suppliers' discrimination: A bivariate probit model with partial observability. *China Agricultural Economic Review*.
- Chankova, S., Sulzbach, S., & Diop, F. (2008). Impact of mutual health organizations: evidence from West Africa. *Health policy and planning*, 23(4), 264-276.
- Chen, K., Hu, W., Xiao, C., & Xing, L. (2013). Smallholder participation in hog insurance and willingness to pay for improved policies: Evidence from Sichuan province in China. *ILO Microinsurance Innovation Facility Research Paper*, (28).
- Churchill, C. (2006). *Protecting the poor: A microinsurance compendium*. Geneva, Switzerland: International Labour Organization. Retrieved from <http://www.munichre-foundation.org/de/dms/MRS/Documents/ProtectingthepoorAmicroinsurancecompendiumFullBook.pdf>
- Cohen, A., & Einav, L. (2003). The effects of mandatory seat belt laws on driving behavior and traffic fatalities. *Review of Economics and Statistics*, 85(4), 828-843.
- Cole, S., Giné, X., Tobacman, J., Topalova, P., Townsend, R., & Vickery, J. (2013). Barriers to household risk management: Evidence from India. *American Economic Journal: Applied Economics*, 5(1), 104-35.
- Dash, G., & IM, J. (2018). Determinants of life insurance demand: Evidences from India. *Asia Pacific Journal of Advanced Business and Social Studies*, 4(2), 86-99.
- De Allegri, M., Sanon, M., Bridges, J., & Sauerborn, R. (2006). Understanding consumers' preferences and decision to enrol in community-based health insurance in rural West Africa. *Health policy*, 76(1), 58-71.
- Dong, H., De Allegri, M., Gnawali, D., Souares, A., & Sauerborn, R. (2009). Drop-out analysis of community-based health insurance membership at Nouna, Burkina Faso. *Health policy*, 92(2-3), 174-179.

- Dror, D. M., Radermacher, R., & Koren, R. (2007). Willingness to pay for health insurance among rural and poor persons: Field evidence from seven micro health insurance units in India. *Health policy*, 82(1), 12-27.
- Feroze, S. M., Chauhan, A. K., Malhotra, R., & Kadian, K. S. (2011). Factors influencing group repayment performance in Haryana: Application of Tobit model. *Agricultural Economics Research Review*, 24 (5), 57-66.
- Galarza, F., & Carter, M. R. (2011). Risk preferences and demand for insurance in Peru: A field experiment.
- Giesbert, L. (2010). Uptake of micro-life insurance in rural Ghana. *GIGA Hamburg and Humboldt University of Berlin. Berlin, Germany*.
- Gine, X., Karlan, D., & Ngatia, M. (2013). Social networks, financial literacy and index insurance.
- Giné, X., Townsend, R., & Vickery, J. (2008). Patterns of rainfall insurance participation in rural India. *The World Bank Economic Review*, 22(3), 539-566.
- Guttman, J. M. (2008). Assortative matching, adverse selection, and group lending. *Journal of development Economics*, 87 (1), 51-56.
- Hammond, J. D., Houston, D. B., & Melander, E. R. (1967). Determinants of household life insurance premium expenditures: An empirical investigation. *Journal of Risk and Insurance*, 397-408.
- Hazell, P. B. (1992). The appropriate role of agricultural insurance in developing countries. *Journal of International Development*, 4(6), 567-581.
- Ito, S., & Kono, H. (2010). Why is the take-up of microinsurance so low? Evidence from a health insurance scheme in India. *The Developing Economies*, 48(1), 74-101.
- Jaina, S., & Mansuri, G. (2003). A little at a time: the use of regularly scheduled repayments in microfinance programs. *Journal of development Economics*, 72(1), 253-279.
- Jehu-Appiah, C., Aryeetey, G., Agyepong, I., Spaan, E., & Baltussen, R. (2012). Household perceptions and their implications for enrolment in the National Health Insurance Scheme in Ghana. *Health policy and planning*, 27(3), 222-233.

- Jütting, J. P. (2003). Do community-based health insurance schemes improve poor people's access to health care? Evidence from rural Senegal. *World development*, 32(2), 273-288.
- Kandel, N. (2018). Nepal Health Insurance Bill: Possible Challenges and Way Forwards. *Journal of the Nepal Medical Association*, 56(210).
- Karlan, D., Osei, R., Osei-Akoto, I., & Udry, C. (2012). Agricultural decisions after relaxing credit and risk constraints. *The Quarterly Journal of Economics*, 129(2), 597-652.
- Liu, Y., & Myers, R. J. (2012). The dynamics of insurance demand under liquidity constraints and insurer default risk. *International Food Policy Research Institute (IFPRI)*.
- Matul, M. (2005, May). Demand for micro insurance in Georgia: quantitative study results. In *8th Annual Conference on Micro finance Institutions, Bucharest*.
- Meghan, S. (2010). Micro-Finance Health Insurance in Developing Countries.
- Morris, S. S., Carletto, C., Hoddinott, J., & Christiaensen, L. J. (2000). Validity of rapid estimates of household wealth and income for health surveys in rural Africa. *Journal of Epidemiology & Community Health*, 54(5), 381-387.
- Morsink, K. (2011). Weathering the storm: the demand for and impact of microinsurance. *University of Twente Doctoral Dissertation*.
- Ndurukia, Z., Njeru, A. W., & Waiganjo, E. (2017). The Determinants of Demand For Micro Insurance Services in Kenya. *American Journal of Finance*, 2(6), 79-107.
- NEPAL, S. (2019, June 26). *The Himalayan Times*. Retrieved from The Himalayan Times: <https://thehimalayantimes.com/opinion/health-insurance-in-nepal/>
- Nguyen, H., & Knowles, J. (2010). Demand for voluntary health insurance in developing countries: the case of Vietnam's school-age children and adolescent student health insurance program. *Social science & medicine*, 71(12), 2074-2082.
- Nicholson, W., & Snyder, C. M. (2012). *Microeconomic theory: Basic principles and extensions*. Nelson Education.

- Noglo, Y., & Androuais, A. (2015). The determinants of group lending repayment performance: evidence from Togo. *Canadian Journal of Development Studies/Revue canadienne d'études du développement*, 36(4), 536-554.
- Ondruska, T., Pastorakova, E., & Brokesova, Z. (2016). Personal, Demographic and Economic Determinants of the Life Insurance Consumption. *Sixth Asia- Pacific Conference on Global Business, Economics, Finance and Social Science*, (pp. 1-14). Bangkok- Thailand.
- Onduso, B. N. (2014). *Factors influencing penetration of micro-insurance in kenya* (Doctoral dissertation).
- Onyeagocha, S. U. O., Chidebelu, S. A. N. D., & Okorji, E. C. (2012). Determinants of repayment of loan beneficiaries of micro finance institutions in southeast states of Nigeria. *International Journal of Agricultural Management and Development (IJAMAD)*, 25 (2) 167-175.
- Pasha, S. A. M., & Negese, T. (2014). Performance of loan repayment determinants in Ethiopian micro finance-An analysis. *Eurasian Journal of Business and Economics*, 7 (13), 29-49.
- Ramesh, M., & Wu, X. (2008). Realigning public and private health care in Southeast Asia. *The Pacific Review*, 21(2), 171-187.
- Rejda, G. E. (2011). *Principles of risk management and insurance*. Pearson Education India.
- Schneider, P., & Diop, F. (2001). *Synopsis of results on the impact of community-based health insurance on financial accessibility to health care in Rwanda*. World Bank, Washington, DC.
- SmareMuchie, M. & Worku, Y. B., (2019). The Uptake of E-Commerce Services In Johannesburg. *Civil Engineering Journal*, 5(2), 349-362.
- Stiglitz, J. E. (1990). Peer monitoring and credit markets. *The world bank economic review*, 4(3), 351-366.
- Tadesse, M., & Brans, M. V. (2012). Risk, coping mechanisms, and factors in the demand for micro-insurance in Ethiopia. *Journal of economics and international Finance*, 4(4), 79-91.

- Thornton, R. L., Hatt, L. E., Field, E. M., Islam, M., Solís Diaz, F., & González, M. A. (2009). Social security health insurance for the informal sector in Nicaragua: a randomized evaluation. *Health economics*, 19(S1), 181-206.
- Townsend, R., & Vickery, J. (2013). Barriers to household risk management: Evidence from India. *American Economic Journal: Applied Economics*, 5(1), 104-35.
- Uddin, M. A. (2017). Microinsurance in India: Insurance literacy and demand. *Business and Economic Horizons*, 13(2), 182-191.
- Waugham, E. J. (1989). *Fundamentals of Risk and Insurance* (5th ed ed.). Iowa: University of Iowa.
- Wydick, B. (1999). Can social cohesion be harnessed to repair market failures? Evidence from group lending in Guatemala. *The Economic Journal*, 109(457), 463-475.
- Zeppou, M.& Sotirakou, T., (2006). Utilizing performance measurement to modernize the Greek public sector. *Management Decision*.

## Appendix A

### Research Questionnaire

#### Customers perception towards health insurance in Nepal

Dear Sir/Madam,

I am Navaraj Sharma, Student of School of Management, Tribhuvan University, conducting an academic research on “Customers’ Perception towards health insurance in Kathmandu”. This is needed to meet the requirement for the master’s degree in Tribhuvan University. The major objective of this research is to analyze the perception of customers towards health insurance. So, this is humble request to you all the respondents to fill up the questionnaire and feel free to answer the given question according to your understanding. Please be confident as all your responses will be maintained absolutely confidential and used for only academic purposes. Your participation in the study is anonymous.

**A. Please fill up the following (*Your personal details shall be kept highly confidential and the information provided shall be used for research purpose only*)**

**Name (Optional):** .....

**Gender:** ( ) Male ( ) Female

**Age:**

Below 20 years ( ) 20-30 years ( ) 30-40 years ( ) 40-50 years ( ) 50 years & above

**Marital Status:**

( ) Single ( ) Married ( ) divorced ( ) Widow

**Employment Status:**

( ) Employed ( ) Unemployed ( ) Self Employed

**Education:**

( ) Illiterate ( ) Literate ( ) Secondary and Higher Secondary

**Income Level:**

( ) Below 20000 ( ) 20001-40000 ( ) 400001-60000 ( ) 60001 and above

**Household Size:**

( ) 2            ( ) 3            ( ) 4            ( ) More than 4

Please specify your level of agreement and disagreement associated with the following statement based on the current situations of indicators mentions below. (Please make a tick mark in appropriate box as per the following scheme).

[1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree]

**Income Constraints (IC)**

S. No.	Particulars	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Income affects the health insurance behavior of clients.	83	62	22	20	13
2	The each income group people easily take health insurance services	54	81	32	21	12
3	Health insurance should be done when there is sufficient income .	59	104	21	12	4

**Liquidity Constraints (LC)**

S. No.	Particulars	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Liquidity matter while doing health insurance.	79	56	31	24	10
2	The clients having liquidity can repay the premium at time	64	52	43	33	8
3	The new clients who make health insurance have high liquidity.	59	96	32	12	4



### Opportunity Cost (OC)

S. No.	Particulars	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	The health insurance of large amount increase opportunity cost	13	43	29	73	42
2	Client's health insurance perceptions are directly influences by opportunity cost.	5	21	11	80	83
3	The new health insurance clients have high opportunity cost	32	49	21	61	37

### Lack of Information (LI)

S. No.	Particulars	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Lack of information impacts on the perception of clients for health insurance.	13	43	32	31	81
2	It is difficult to do health insurance, when clients are unaware	13	21	32	63	70
3	Health insurance is advantageous for educated clients	19	59	29	50	43

### Availability of government Subsidy (ASG)

S. No.	Particulars	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Subsidies from government change the consumers perception towards health insurance	9	21	15	61	94
2	The government subsidies helps to uplift the health risk of the clients	7	15	21	72	85
3	The number of health insurance clients increases, when government provide the subsidies	39	53	25	52	31

### Linkage with the Government health care (LGH)

S. No.	Particulars	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Government linkage change the consumers perceptions on health insurance	5	11	19	75	90
2	The beliefs on health insurance increase if there is government linkage	17	21	18	60	84

**Risk Exposure (RE)**

<b>S. No.</b>	<b>Particulars</b>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
1	Risk exposure play a vital role in consumers perceptions on health insurance	15	21	9	42	113
2	Frequent increase in risk demotivates the insurance clients	19	11	9	82	79

**Trust (T)**

<b>S. No.</b>	<b>Particulars</b>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
1	The health insurance should provide different service to increase the trust	34	21	13	60	72
2	It is easy to make clients trust about the health insurance services	33	12	21	54	80

### Enrollment of Health Insurance (EHI)

<b>S. No.</b>	<b>Particulars</b>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
1	Enrollment of health insurance increases the trust of clients.	43	51	25	50	31
2	Enrollment of the health insurance reduce the risk of the clients	33	35	25	43	64
3	Enrollment of the health insurance increases the financial security of the clients. .	11	19	9	82	79
4	Enrollment of the health insurance reduce opportunity cost	7	15	21	72	85