Willingness to buy supplementary health insurance under employer based health insurance system in Pakistan: a case study of Rawalpindi and Islamabad

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DECLARATION

I certify that this research work titled *"A Study of employer based health insurance and investigation of willingness to buy supplementary health insurance"* is my own work. The work has not been presented elsewhere for assessment. The material that has been used from other sources it has been properly acknowledged / referred.

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CERTIFICATE

This is to certify that this thesis entitled: Willingness to Buy Supplementary Health Insurance Under Employer Based Health Insurance System in Pakistan. submitted by Ms. Faiza Malik is accepted in its present form by the Department of Health Economics, Pakistan Institute of Development Economics (PIDE), Islamabad as satisfying the requirements for partial fulfillment of the degree of M.Phil in Health Economics.

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ABSTRACT

This study investigates the willingness to pay for supplementary health insurance and also describes the health insurance industry of Pakistan.200 respondents were selected from different private and government organizations in Islamabad and Rawalpindi. Probit regression was used to examine the impact of income, age, city, health status, anticipated expenditure, education on the willingness to pay for supplementary health insurance. The results have revealed that 65.5% of the people were willing to buy supplementary health insurance. Income of head of household, years of education, family size, and age turned out to be significant factors in determining this decision. These results are similar to the literature reviewed in this context. While city, health status, anticipated expenditure had no impact on the probability of people saying yes to pay for supplementary health insurance unlike the studies done in other countries.

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ABBREVIATIONS

NDC	**Non communicable diseases**
BOD	**Burden of diseases**
SPCD	**Social policy and development centre**
SBP	**State bank of Pakistan**
WTP	**Willingness to pay**
MHS	**Military health system**
MHI	**Micro health insurance**
CVM	**Contingent Valuation method**
SPCD	**Social policy development centre**
SRSP	**Sindh rural support program**
RSP	**Rural support program**
BISP	**Benazir income support program**
NRSP	**National rural support program**
OECD	**Organization for economic corporation and development**
PHI	**Private health insurance**
GP	**General Practitioner**
PESSI	**Punjab employees social security institution**

CHAPTER 1

INTRODUCTION

In this chapter basic information about topic of the research and relevant terms is given. Then reason for the selection of this topic is given. In the end chapter is completed with research question, research objectives, significance of study and thesis structure.

1.1 BACKGROUND TO THE RESEARCH

1.1.1 Background

Health is important in determining the human capital. The efficiency and productivity of the labor force relies upon it. Better health of the people helps to achieve the economic growth. Government takes necessary steps to provide health care facilities to the people.

Population of Pakistan is growing at very fast rate. It is expected that by the year 2050, that population of Pakistan would be around dizzying number of 285 million. Due to annual population growth rate of 2.5%, government is facing difficulties in providing satisfactory health services to the entire population (Manzoor, et al. 2009)

It was stated in the Economic Survey of Pakistan (2005-06),that the government share of GDP spend on health sector is just 0.75 %.Many vertical and horizontal programs are launched by government and are operational. Lady Health Worker Programme; Malaria Control Programme; Tuberculosis and HIV/AIDS Control Programme; National Maternal and Child Health Programme; the Expanded Programme on Immunization; Cancer Treatment Programme; Food and Nutrition Programme, and; the Prime Minister Programme for Preventive and Control of Hepatitis A & B are examples of federally funded vertical programs. Government has made polices to directly address the health issues these include health related Millennium development goals and Medium term development framework.

Inspite of these steps government has not been able to address and resolve the issues in health sector properly. Pakistan is under [1]double burden of diseases. Statistics have revealed that the nutrition and reproductive problems due to communicable disease accounts for 58 % of the burden of disease (BOD) in Pakistan. Non communicable diseases (NDC) due to lifestyle, pollution, unhealthy diet are liable for 10 %of BOD in Pakistan. Social Policy Development centre (SPDC), 2004 estimated that 123 out of every 1000 alive children after infancy die before reaching age of five.

Out of the children who survived a large proportion become victim of malnutrition which leads to impaired immunity and liability to infections. Malnutrition is bug issue in Pakistan. Human Conditions Report (2003) estimated that 40 percent of five year old are suffering from malnutrition.

Pakistan's financial modes for medical care are very weak (Lashari, 2005). For improvement of health sector it is necessary to update and develop the entire infrastructure. Currently the two systems that is private and public/social health insurance is working parallel to each other with no interaction. The overall condition of medical care financing is very unsatisfactory.

World Health Organization (2007) found that small private health insurance sector is small and is not enough to fulfill the needs of ever growing population. It was estimated that fifty four companies were actively working in the country. Only one of them was providing individual health insurance services and seven were offering group health insurance. The industry is mostly serving the corporations and it gives them pool of healthy people and cash payment mechanism is secured by the financially stable organizations.

The state bank of Pakistan (SBP) has estimated that Pakistan insurance market share in GDP is very low. The demand of insurance is very low and premiums are comparatively high due to this insurance companies hesitate to offer health insurance. In current situation where customer's financial condition is not strong it is rather difficult for insurance companies to offer policies and end up selling very few policies. Insurance companies ignore the stratum of society which is

[1] Double burden of diseases means increase in communicable and non communicable diseases.

highly affected by health risks. Eventually the people who should be supported by health insurance always stay out of it. There should be regulations to help insurance companies to discriminate and provide standard appropriate rates to all people regardless of their financial and medical backgrounds.

Shehzad (2005) argued that for improvement of quality in health sector there should be proper cash inflows. Developed nations create finances with tax collections, private funds, and social insurance. Contrary, developing nations are still making attempts to make a reliable system .In these countries there is wide discrimination between the health services provided to rich and poor. There should be proper planning to improve the efficiency of current systems with utilization of resources. While making a plan the participation and satisfaction of target population should be considered.

According to Brainard (2008) in both developed and developing countries the progress and growth of health insurance plans relies on private and public health care providers with government keeping check on them. In developing countries the people make out of pocket payments for health services. As a result there is low investment in health sector which leads to weak scenario. Thus, health insurance can grow in this current situation. Mexico and Colombia are good examples.

The health insurance sector is influenced by a country's political scenario, government intervening and religious believes. People are under an impression that insurance is prohibited in Islam and as results regions where more population strickly follow Islam the spread of insurance is difficult. Furthermore, it is believed that urbanization would help to increase insurance consumption but it didn't act a major factor in Pakistan.

According to Musgrove, et al. (2002) in developing nations private health insurance is limited to the rich people. It was pointed out by Sbarbaro (2000) health issues are more common in poor people. This scenario creates a paradox leaving people who need health insurance more out of the pool.Moslty insurance policies infiltrate employed people. This is not good for the development of health insurance.

Dror and Jacquier (1999) through light on the paradox they said even In Europe where health insurance is at national level at first these nations faced the same problem. Sekhri and Savedoff (2005) explained that in initial stages in Europe Health insurance coverage was mainly provided by the local unions and organizations. They provided same rate to everyone irrespective of the financial and demographic background.

Lofgren, et al. (2008) in a study figured out that willingness to pay for health services depend on level of income, education, family size and occurrence of disease in the family. It was found level of awareness about health has increased.Sepehri,et al.(2006) argued that in case of mandatory health insurance the utilization of health care services will increase. In case of voluntary insurance people stay careful and hesitate to over use the services because it leads to higher premium chargers (Chang and Trivedi, 2003; Wagstaff, 2005).

People willingness to pay for private health insurance and awareness level should be analyzed. There is also need look into different factors which create problems in the progress of PHI.

Only few studies have been done in Pakistan on awareness and willingness to pay for health insurance but the research has been conducted in other developing countries .Those studies can be used as a reference. Similar study done in China willingness to pay for health insurance turned out to be high enough for the development and progress of health insurance (Barnighausen, et al., 2001).Sixty four people in Ghana were willing to buy health insurance with rational premiums (Asenso-Okyere, et al., 1997).Meanwhile in Iran rural population was also willing to purchase health insurance (Asgary, et al., 2001).

Private health insurance is spreading due to unsatisfactory public health services and better perception about health issues. The current situation of public health system is creating a opportunity for private health insurance. Increase in demand would put a pressure on the suppliers to provide better quality and also motivates the technological advancement.

The economic purpose of health insurance is to protect people from financial burden and economic loss due to sickness and disease. To reduce the risk of financial loss people are willing to pay more than fair price for health insurance. Society has to bear the consequences of

increase in health insurance. Due to cost sharing mechanism consumers don't have to pay the full price of services. As a result the demand of health services increases beyond limit. Moral hazard causes welfare loss to the society. The low price doesn't change the fact that additional health care demanded must be paid for. People consider premiums as fixed cost. They think premium are too high as compared to the coverage. Due to this believe there is a huge pressure on insurance companies to reduce the premiums. To reduce premiums insurances companies adopt different strategies including limiting supply and impose price control mechanism on service providers. Limitations on health services include delayed care, low coverage, and specific coverage to certain age group. Failure to cover all health problems is an issue which is exploited by media and politicians. This scenario results in mandated coverage. People are forced to pay for services they would not voluntarily buy if they had to bear the whole cost by themselves. They purchased additional services due to perceived low marginal price. Price control strategies cause inadequate supply in relation to demand including delayed or insufficient treatment. As a consequence social welfare is reduced.

Mostly health insurance participants use little health services. They are net payers and are willing to sacrifice some benefits to get lower premiums. The minority of insurers consume large amount of health care and are net receivers. They don't care about the premiums. They want more coverage and premiums are irrelevant to them no matter how great the cost and unusual the treatment. Insurance is transfer payment system.Net receivers cannot demand more than net payers are willing to give. This conflict is resolved by limiting supply.

My study present estimates for willingness to purchase supplementary health insurance and describes different health insurance systems which are operational in Pakistan. Moreover it displays the [2]eq-5D health states of the people of Rawalpindi and Islamabad. These estimates will be used in accessing the level of satisfaction of people with the services they are utilizing and issues and problem in current set up.

[2] Eq-5d is a generic preference based measure used to measure the health status. This questionnaire covers general aspects of health. It is the product of group.

1.1.2 Research questions

1. Are people willing to purchase supplementary health insurance?
2. What is the impact of income of head of household, health status, anticipated expenditure and family size on willingness to pay for supplementary health insurance?
3. Does education motivate people to pay for supplementary health insurance?
4. What are the issues in currently operational health insurance system in Pakistan?

1.1.4 Objectives of the study

- To determine the relationship between income of head of household, family size, years of education and willingness to pay for supplementary health insurance.
- To access the linkage of health status with the decision to pay for supplementary health insurance.
- Does anticipated expenditure of health affect willingness to pay for supplementary health insurance?
- Does place of residence affects the willingness to pay for supplementary health insurance?

1.1.5 Hypothesis of the study

H_1 =There is no significant relationship between place of residence and willingness to purchase supplementary health insurance.

H_2 =There is no significant relation between income of head of house hold and willingness to buy supplementary health insurance.

H_3=There is no significant relation between family size and willingness to buy supplementary health insurance.

H_4=There is no significant relationship between years of education and willingness to buy supplementary health insurance.

H_5=There is no significant relation between health status and willingness to buy supplementary health insurance.

H_6=There is no significant relation between unanticipated expenditure of health and willingness to pay for supplementary health insurance.

1.1.6 Importance of the study

In Pakistan health care financing is a severe problem. Innovative ways to create funds for health services have been often sought. By developing health insurance people can be protected from unexpected and catastrophic cost of illness. However, this raise a number of questions are people willing to pay for health insurance if yes than how much? What factors influence this decision? It is therefore important to understand the demand for health insurance. The willingness to pay for health services depend on many factors. Studies have shown that absence of health insurance has a bad impact on health of people. Access to health care services and catastrophic health care expenditures are known to be major causes of poverty in developing countries. In developing nations illness is related to unemployment and low income. Literature provides evidence that health insurance plays an important role in decreasing the health care costs. But in developed nations health insurance caused excessive utilization of health care services which in long decreases the wellbeing of the society.

In the current scenario of high out of pocket spending and issues such as quality, equality and effectiveness of health care policy makers are turning their attention to promoting health insurance. It is important to get information on the willingness to pay among potential clients and to examine the factors affecting this choice. Moreover, it is also necessary to control the potential threats in getting benefits from health insurance such as moral hazard.

The purpose of this study is to examine the employer based health insurance provided by different organizations in Rawalpindi and Islamabad. Factors that determine people level of satisfaction and weakness in this system.

Results of this will help policy makers in knowing the willingness to pay for supplementary health insurance among people who are already enrolled or part of employer based health insurance.

1.1.8 Organization of the study

The layout adopted for this thesis is according to the "Guidelines for preparing MS/PhD research thesis", given by Pakistan Institute of Development Economics, Islamabad

Pakistan. This layout is followed in logical design; brief overview of all chapters of research work is given as follows: Chapter 1 narrates a brief introduction of the topic and relevant terms. It also gives an outlook of the importance of study, research question, research objectives, Moreover; thesis structure was also discussed in this chapter. Chapter 2 gives the basic review of relevant literature from different books and research papers. Moreover reports published by different organizations which are working for improving health insurance systems all around the world. Problems related to cost sharing mechanisms are also given in this chapter. Chapter 3 describes the health insurance industry of Pakistan. It explains different types of health insurance currently operational in the country. Moreover, highlights the weakness in the system currently working. Chapter 4 narrates the research methodology used for primary data collection and it explains different organizations visited as well as interviewed for collecting data. It also discusses the limitations of study, delimitations of study and sample size of the research work. Chapter 5 is reserved for collection of required primary data collection has discussed in the given chapter. Summary of primary data collection process through survey and interviews is mentioned in this chapter. Chapter 6 This chapter analyzes the results of survey and interviews and also gives discussion of results obtained after analysis of data. Results are shown in various formats like charts and tables. Chapter 7 is reserved for recommendations on the basis of research conducted.

CHAPTER 2: REVIEW OF LITERATURE.

2.1 CHAPTER OVERVIEW

This chapter gives the basic review of relevant literature from different books and research papers. Moreover reports published by different organizations which are working for providing better health insurance plans and their aim is to aware the practitioners about the problems.

Section 2.2 discusses the studies on willingness to pay for health insurance. Section 2.3 focuses on previous research on tradeoff between risk sharing and moral hazard in health insurance. Section 2.4 discuses demand for health insurance and its affect on quality of care. Section 2.5 Studies done on private health insurance. Section 2.6 throws light on the literature regarding moral hazard .Section 2.7 Theories on demand of health insurance. While studies related to Pakistan are reviewed in section 2.8.

2.2 Willingness to pay for health insurance

Health care financing is major problem in Nigeria. Mostly, people have to make out of pocket payments to purchase health services. Health insurance schemes are suggested as an alternative to increase the access of health services. But such schemes have not received much attention in Nigeria. Community health prepayment poverty alleviation scheme was proposed to resolve the issue. The willingness to pay for such schemes was investigated. The study found that community members were willing to participate and their confidence level was also high. Women, uneducated, old and poor were neglected in past because their willingness to pay was very low. They were identified as the vulnerable group. So the study suggests that health insurance schemes should access them by selective targeting of most disadvantageous groups. The sliding scale of premiums should be used. Premiums should not be catastrophic in nature. Measures should be taken to incorporate the poor people. To improve the current situation government should increase the commitment. Lack of awareness and education is a major problem. Poor people are mostly unaware of the importance of the health practices and as a result they are reluctant to invest in their own health (Ataguba, et al., 2007).

In a study to examine the awareness about health insurance among individuals it was found that there is very low level of awareness and willingness to join health insurance in India. Seven major factors influence the decision. Gender, age, income of respondents, occupation, and education turned out to be the significant factors (Bawa and Ruchita, 2011).

Mark, et al. (2005) collected evidence on willingness to pay for health insurance among 3024 households in seven locations. The WTP of the insured persons turned out to be higher than uninsured. Policy maker in India have turned their attention towards creating health insurance plan for poor. Steps have been taken on state and central government level. It was assumed that health insurance can be developed on voluntary basis in India. So it was very important to gather information on the willingness to pay and the factors which affect this choice behavior. For poor the health insurance is likely to develop through micro health insurance units. The purpose of this research was to collect the maximal willingness to pay for health insurance among poor and rural people of India. Bidding game was used in this research. In this method the respondent is given a price which is increased each time person accepted it and lowered otherwise. The results have shown that the WTP among poor and the rural population of India is at least 1.35% of median Household income per household member per year or 1.8% of median non health income per year .The estimates of this study are higher than previous research. So this proves that the neglected population surveyed in this study had greater potential to generate revenues for health insurance. Results showed positive correlation of WTP with income but negative correlation when WTP was expressed as a percentage of income. So they figured out that the poor people were more willing to pay a higher percentage of their income as premium of health insurance.WTP and education were positively correlated but this relationship didn't hold when WTP was expressed as a percentage of income. House hold size turned out to be very strong determinant affection WTO.WTP per household member decreases with HH size but up to certain limit. The WTP levels of the people insured by MIU were higher even though they were not allowed to choose the benefit package attached to bid.

2.3 Trade off between risk sharing and moral hazard in health insurance

A nonlinear budget set model of health insurance was used to induce tradeoff between the welfare gains from risk protection and welfare losses from moral hazard. Deductibles, coinsurance rates and stop losses affect moral hazard and risk protection. Data from employer sponsored health insurance was used to describe the properties of model. It was found that average deadweight losses from moral hazard significantly overweight the average welfare gains from risk protection. However, their welfare impacts turned out to be very small as compared to the welfare impact of transfers from other agents through premiums and transfer from government through the tax preference for employer sponsored health insurance (Kowalski, 2012).

In modern world medical insurance has introduced a phenomenon of moral hazard. Insurance induces consumers to purchase more health services. The demand for health care increases up to the point where marginal value exceeds marginal cost. The optimal coinsurance rate was found by the ratio of (Moral hazard loss)/ (Moral hazard loss + Risk premium).Data collected suggested that optimal coinsurance rate will be different for different medical risks. There were extreme optimal coinsurance rates. Hospital care was characterized by the optimal coinsurance rate of zero. Coinsurance rate C 1.0 was found to be optimal for well care (low risk, high demand elasticity).Preventive care was not included in voluntary health insurance choices (Phelps,2002).

Increase in health insurance affects the allocation of health care resources. Cost sharing mechanism decrease the out of pocket payments made by people. As a result the demand of health care increases beyond limit. Consumers don't realize the social cost of producing those services. Societies suffer due to this behavior. The estimates of demand for health care and health insurances were used to access the tradeoff between moral and risk sharing. The optimal coinsurance rate was found to be 50%.With the optimal coinsurance rate the issue of moral hazard and sufficient coverage can be resolved. Moreover data showed that there was notable economics loss for up to 40 million Americans who suffered due to absence of health insurance (Manning and Marquis, 1989).

Feldstein and Gruber (1995) in their study to find the impact of shifting to policy with a 50% coinsurance rate and 10 percent of income limit on out of pocket expenditures it was revealed that major risk policy decreased health care spending by nearly 20 %.The aggregate economic efficiency was increased due to decreased excess consumption of health services. The increase in efficiency is correlated to demand elasticities and the extent of risk aversion. The greater the demand elasticity or risk sensitivity the larger the gains. The objective of insurance is to protect people from risk. But insurance brings change in the behavior of insured. The optimal insurance plan would involve tradeoff between risk aversion and moral hazard. The analysis has revealed that 50% coinsurance rate and limit on out of pocket spending up to 10 % of income reduced total medical spending. This change reduces deadweight loss. So as a result net welfare gain was increased.

Martin S. Feldstein examined the US health insurance system. In general Americans are over insured. He created and estimated the structural equation for the demand of health care. He analyzed the dynamic relation between purchases of insurance and the demand and supply for health care.Futhermore, he estimated the welfare gains from decreasing insurance by increase in coinsurance rate from 0.33 to 0.50 and 0.67.The results revealed the net gain of $4 billion.

2.4 Demand for health insurance and its effect on health and quality of care.

Most of the research done in past on price elasticities of demand for health insurance targets the employees behavior and decisions to choose employer based health insurance plans. But to launch successful universal insurance the focus should be on uninsured people. Who are not offered to enroll in employer based plans. The experiment done in 2008 to assess the willingness to pay for health insurance revealed comparatively greater price elasticities. Data collected was analyzed to estimate coverage expansion under Affordable Care Act. The results shown very trace signs of adverse selection and also revealed that 39 million uninsured people would gain coverage (Krueger and Kuiemko, 2011).

Cost sharing has no effect on the quality of care received by the participants. Cost sharing reduced both highly effective and less effective services. Cost sharing doesn't affect the health

of participants but there were exceptions. In poor and sickest patients free care cause improvements in hypertension, dental health, vision and some serious symptoms RAND (2006).

Health insurance policies on its demand for health care are very important topic. Due to the evolution of military health system with time cost containment strategies had been tested in private health plans. These methods have affected the health care services utilization and supply in many aspects. Each change has affect on access of services to the people; intensity of use and its demand etc.

Ringel, et al. (n.d) research was intended to summarize the effects of policy changes on the demand of Department of Defence beneficiaries' health care services and associated costs. Before this study there was very little research on the demand DD health care which is different from general health care demand. To predict the effect of change in the health care benefits packages one should understand the uniqueness of this system. There are four obvious differences.Firstly,active duty personals seek less care as compared to the civilians of their age but they are provided with mote preventive care and routine check ups.Health care use by active duty personals was proved to be unaffected by the change in health packages. Second, the spouses of active duty and retirees are eligible for other insurance by their current employer. But they may not be able to participate in those other insurance programs but only if they pay a share of premium. If they participate they may be enroll through either one of them or both. Changes in packages affect all enrollees. Third MHS benefits are different for military treatment facility and civilian care. As a consequence the beneficiary cost depends on both level of demand and its allocation between MTFs and civilian providers. Military beneficiaries utilize more services than civilians due to better packages in the MHS.General demand literature can be used to study MHS demand. Both civilians and military beneficiaries lie on the same demand curve but at different positions. Differences in use may be due to different response to same packages. If that is case than the general literature on demand cannot be used to describe the MHS demand. Literature supports the first explanation. In spite of, many differences in the demand of MHs and general health care demand literature still provides valuable information regarding how people respond to the changes in the health care packages.

The elasticity of demand is the change in the responsiveness of the demand of care with changes in its determinants. The main factors are price of good or service, the income, prices of related goods or services. Elasticity measures are more beneficial because they rely on the relative magnitude of changes instead of absolute. Elasticity measures have no units of measurement. This feature makes them very useful for comparisons of demand responses among different products, countries and people. Results have shown that demand of health care is price inelastic. Although the range of price elasticity estimates is wide this implies that for 1 percent increase in price of health care there will be corresponding 0.17 percent decrease in health care expenditures. The change in price of health care affect the probability of accessing health care more than the number of visits after care had been sought. Results have revealed lower levels of demand elasticity for lower levels of cost sharing. The demand for health care turned out to be income elastic as well. The estimates were in the range of 0 to 0.2.The positive sign means that as income increases the demand for health care also increases. Magnitude of elasticity had revealed that the demand response is small. Time series data suggests otherwise. This difference is because of other factors which may improve across time frames such as advancement in medical technology. Demand of specific treatments turned out to be more price sensitive. Preventive care and pharmacy had larger price elasticities. This result is not very surprising. The price of substitutes is very important factor for demand elasticity. In case of preventive care there is large number of substitutes. When the price of preventive care increases the people will start using other alternative to maintain their health such as nutritional supplements and healthy diet. Moreover, preventive care is a sort of luxury good and so there is cut off with increase in price. The opportunity cost of seeking preventive care is higher when sick. The benefits of preventive care are often ignored. The difference of elasticities can be because of the fact that they are not covered by insurance. The change in responsiveness of demand for different health packages to changes in the price of insurance has gained more attention. Change in out of pocket costs of services or premium will have strong effect on the demand of insurance.

The costs of medical care have been increasing and so does the share of GNP devoted to medical care. This increase might be because of spread of health insurance. This results in

increase demand for higher quality and excessive utilization of medical services. No one has given evidence that the increase in health insurance affects the health care expenditure. It it is not possible to prove than widely accepted believe that price distortion due to health insurance is inducing excessive resources in health care might not be correct. Quantitative role of health insurance can be detected by the change in demand responses due to change in insurance. There is disagreement on this hypothesis by the factor of 10 or more in previous studies. Due to uncertainty about how demand responds to changed prices and the importance of this behavior lead federal government to conduct RAND health insurance experiment in 1974.The goal of the study was to minimize the uncertainty about this issue. Results showed that insurance do cause increase in medical expenditure and there is evidence of welfare loss from insurance (Manning, et al., 1988).

Feldstein and Friedman (1977) estimated the optimal coinsurance rate under different assumptions and calculated the effect of changes in tax policy of employer based health insurance on optimum. To get optimum insurance coverage individual should balance his gain by avoiding risk against his loss from distortion of demand. In the US tax system the purchase of excessive health insurance is subsidized. It permits the deduction of some amount of individual premiums and removes the exclusion from employees' taxable incomes for employer premium payments. The US operation model of demand for health insurance shows that tax reduction does increase insurance coverage. Insurance is responsible for much rise in health care costs and health care crises can be attributed to the tax subsidies.

Ahuja and jutting (n.d.) research is based on effect of health insurance on the life of poor people and they also investigate the influence of institutional rigidities on the demand of health insurance. The idea of micro insurance is getting attention of researchers and policy makers largely because of the success of microcredit programs in helping poor in different part of world.Secondly,risk management capacity of the poor has been recognized as a very important factor in poverty alleviation program. The research has proved that property designed and implemented micro insurance program can help to meet the challenges of the poor people. Micro insurance reduces the out of pocket expenditure of poor and improve their access to

health services. Results have shown that individual demand of insurance increases as borrowing constraints are relaxed. It is very important to identify the people who can afford health insurance and who cannot. Affordability may not be the only reason in decrease demand of health insurance. It would be wise to embed micro insurance schemes in the existing micro credit schemes. But this hypothesis should be tested in environments where credit is restricted and where it is less binding.

2.5 Demand for Private Health insurance

Governments consider private health insurance as a strong tool which could help finance ever increasing health expenditures. Data has revealed that only a small proportion of health funding in OCED countries is by Private Health insurance (PHI).However PHI has significant role in health financing in some OECD countries. It also serves as primary coverage for specific population groups. Research evaluates the effects of PHI at national level. It described the feasibility of private health insurance in OECD countries. In countries where PHI play major role it provides certain benefits such as provide options for consumer choice, increase in responsiveness. But at the same time it has raised equity issues. Coverage of high risk group will be possible only after the solution of market failures. Policy makers can do this by various ways. For instance they will have to solve the access problems. Private health insurance markets create incentives for players in health system. It helps to meet societal demands. How to make best benefits from PHI markets is very important question for policy makers. Different countries have different answer to this question. The answer will depend upon the priorities of Governments. Some of the policy makers think that PHI market is not worth keeping due to deadweightloss.Yet many OECD countries choose to have PHI market. Merits and demerits of PHI depend upon its role in health system and correlation with public coverage (Colombo and Tapay, 2004).

Costa and Garcia (n.d.) research highlights the quality gap between private and public health insurance and also indentifies the important factors in the demand of private health insurance in Catalonia. Health care quality is used as a important factor in the model for demand of PHI. Demand elasticities have shown that variation in premium has no effect on the demand of

PHI.PHI is turned out to be a luxury good and its demand is very sensitive to health care quality perceptions. Results have revealed that rise in quality of PHI will affect the demand of PHI and NHS equally.

Hofter (n.d.) research is based on the choice of private health insurance in Chile and how this effects the utilization of health services. Gender, marital status, and age turned out to be important factors. Other factors such as education level, income, employment status also influence the decision of purchasing private health insurance. Simulation analysis conform the importance of these determinants.Simaltenous two equation frameworks was used to examine the relation between utilization of health services and private health insurance. Health care utilization estimates used were length of stay in hospital and outpatient health services. Self access health status and long term activity limitations turned out to important in explaining utilization. Results shown that private health insurance affects only outpatient health services. There was a evidence of moral hazard pointed out by Arrow.

2.6 Moral Hazard

Koc (n.d.) in his study to examine the correlation between health status and moral hazard in the demand for health services it was found that moral hazard is higher for healthy for checkup related general practitioner(GP) visits and for chronic care related specialists (SP) visits. The effect was found to be less for healthy for hospital services. In light of these results both conventional theory and the new theory due to Nyman suggests that moral hazard is more important for healthy for both checkup related GP visits and chronic related SP visits. The two theories have differed in opinion for utilization of health services. According to conventional theory moral hazard is more important for the sick people. But Nyman theory argues that moral hazard for consumption of health services is the intended response of the ill. The results suggest that health insurance is endogenous for demand for health services.Exogeneity of health insurance is not possible for demand of health services. Both theories conclude that medical care is not homogenous good. Policy and welfare implications considering moral hazard estimate for medical care as an aggregate entity and then applied to particular categories of service may produce undesired outcomes.

Due to cost sharing mechanisms the price of health services is far below their marginal cost. This cause higher demand for health care than what would exist otherwise. But still health care must be paid for. Additional health care demand should be given its cost. That's why many people believe that health insurance premiums are high as compared to the coverage. Such perceptions generate pressure to reduce them. Limiting supply and imposing price control strategies on providers are steps taken by insurance companies to reduce premium. As a results a gap develops between health care demanded and supplied which reduces social welfare**.** (Ferguson & Leistikow)

Increasing the generosity of health insurance provide more financial protection but at the same time it will cause more loses because of inappropriate consumption by insurers. Moreover it will create agency problems (Cutler and Zeckhauser, n.d.).

In an attempt to find empirical evidence on adverse selection and the extent of the problem it was found that riskier type people buy more coverage and use more care. No evidence of information asymmetries was found. (Cardon & Hendel)

Bolhaar, et al. (2008) had worked on moral hazard and adverse selection in the market for supplementary health insurance. They investigated and calculated dynamic models for decisions related to health insurance and health care utilization. Results showed that moral hazard is not important. They found a strong proof of advantageous selection. Heterogeneity in education level, income and health preferences turned out to be the important factors of adverse selection. They have shown that unobserved fixed effects and dynamics should not be ignored.

2.7 Theories on Demand for health insurance

Eisenhauser (2006) evaluates the theory of the demand for health insurance. The proposed new model was a valuable contribution to the literature on moral hazard and debate over national health insurance. But it was failed to act as a robust alternative of conventional theory.

According to Kenneth J Arrow in absence of private health insurance national health insurance can be successful. Mark V Pauly argued that health insurance causes moral hazard which results in inefficient allocation of resources and government regulation would cause reduction in welfare. So moral hazard discourages the idea of national health insurance. John A. Nyman's (2003) proposed a new explanation on the reason why consumers purchase health insurance. His views are different from conventional ideas. Nyman's book reject the idea that risk aversion increase the demand of health insurance but it still endorse the work of Arrow.

Pauly's in his work has assumed that individual faces a fixed demand curve and a constant marginal cost of production. As a consequence the marginal willingness to pay for care was equal to the marginal cost of care. But if the same individual purchase insurance he/she would anticipates a lower out of pocket price for care and shifts the demand curve down and as a consequence the insured would use more care unless the demand had no price elasticity. Which results in increase of marginal cost of health care and the consumer willingness to pay for health insurance will increase all this add up to the inefficiency. Forcing individuals to pay for the extra care would make them worse off.

David de Meza (1983) explained that demand curved of sick person is different when insured from when uninsured. The reimbursement of medical expenses given by insurance effects the demand curve same as a cash transfer would. As a result consumer willingness to pay for insurance increases with insurance coverage. He argued that Pauly's (1968) had exaggerated the inefficiency caused by moral hazard. In response to this criticism, Pauly (1983) explained that income effects may matter for critically ill patients, but he believed that moral hazard was inefficient in case of healthier consumers.

Nyman discussed the five main flaws in the conventional theory. Firstly it was assumed that any medical care consumed because of being insured is welfare decreasing because it causes the movement along the demand curve. Pauly had argued about the existing believe of researchers that voluntary purchase of health insurance makes the consumer worse off. But Pauly had explained that only mandatory participation reduce welfare for consumers. Pauly explained

that mandatory enrollment will create inefficiency and the net change in utility from this forced purchase could well be negative.

Fuchs (1996) said that voluntary purchases decrease the buyer utility. He further elaborated that third party payments cause patients to over utilize services whose costs exceed their benefits.

Many economists found consensus on the fact that moral hazard exists but as individual enjoys the benefits of extra care and much of the cost is paid by others economists believed that there is no proof who individual engage in moral hazard is worse off at individual level.

Most economists doubt the fact that individual will buy insurance voluntary that reduce his or her utility. Transaction is supposed to be undertaken with full information. The sale of insurance benefits both buyer and seller and parties outside the transaction made a portion of costs sometimes.

The second flaw pointed out by Nyman was that conventional expected utility theory of the demand for health insurance explains that loss is exogenously determined. For instance the if sick person buys care worth of $ 20,000 without insurance the same sick person would buy the same $20,000 care even after being insured. But Pauly's easy has changed this believe .He emphasized that consumer utilize extra care after buying insurance. The conventional theory assumed that consumer has an income elasticity of demand zero. Feenberg and Skinner (1994) or Manning and Marquis (1996), research had proved this concept wrong.

Third, Nyman rejects the assumption of conventional theory that consumers prefer certainty over risk and that risk aversion behavior cause individuals to buy insurance. To support his theory Nyman uses prospect theory by Kahneman and Tversky (1979).The theory explained the violations of expected utility. Nyman concluded on the basis of experiments of Kahneman and Tversky, and others that consumers prefer uncertain loss over certain loss of same intensity. He further insisted that consumer preferences related to risk cannot be used as a reference and if possible inhibits the purchase of insurance. Huge empirical evidence of risk aversion is available which easily rejects conventional wisdom.

Last issue raised by Nyman was the convention introduced by Bernoulli (1738) and Arrow (1971) of equating risk aversion with the diminishing marginal utility of income. Nyman argued that two concepts are different. He used a hypothetical experiment to support his argument.

Suppose a person assign a utility value of 0 to $50,000 and a utility value of 1 o $150,000 and if the same person is asked that how much utility $1000, 000 would give. Due to diminishing marginal utility the individual might assign twice extra utility to the first increment of $50,000 than to the second increment, to sum up the utility of $100,000 is 0.67 keeping the certainty maintained. If the same person has to equate the utility of $100,000 against the utility of gamble to win $150,000 with the probability π of winning and (1- π) of wining $50,000.Nyman explained that in this case probability 0.67 may not be useful. If U ($100,000)=0.67 and U($100,000)= π(1)+(1- π)(0)=0.67.So the theory cannot be used as standard.

Many individuals in developing countries are enrolled in employee benefit or in public health insurance plan. People had poor information regarding the demand of private health insurance. The individual maximizes expected utility by choosing an optimal level of coverage. The package helps enrollees to avoid huge risk in future by paying a premium. But after the enrollment moral hazard may occur because the insured may become less careful (unintentionally increasing the probability of illness) or may be because of excessive utilization when sick.

Moral hazard is described in literature as unintentional change in behavior after enrollment. Nyman argued that moral hazard is planned by third parties. The insurance companies judged the amount of medical care that an insured would use and use probability of illness to set premium levels. The consumers also anticipate their demand and make decision whether to purchase insurance or not. If the insured gets sick he/she use the services the intensity of utilization will be slightly more than otherwise. The probability of illness and the expected quality of care remain almost same between time when the coverage is purchased and at time when service is utilized. Nyman's theory gives consumers more foresight than the previous theory. Both parties are assumed to predict the correct recommendation for treatment.

These foresighted consumers were supposed to prefer uncertainty to certainty and purchase insurance even with their preference for risk. As a result the attempt to elevate moral hazard in general theory o demand was not very successful. Otherwise the Nyman theory was a valuable contribution to the theory of moral hazard. It suggests that some of the excessive utilization of medical care is due to efficient use of resources, because willingness to pay was different among insured and uninsured. An important point to be noticed is that extending insurance to poor people may revealed less efficient results.

The conventional theory states that moral hazard which is additional care purchased as a result of insurance is welfare decreasing because the value of additional health care purchased is less than its cost of production. The theory explained in this study suggests that moral hazard is income transfer effect. The problem is different from what had been elaborated in conventional theory. The truth is consumers place high value on their lives and health, the marginal value of care provided through insurance exceeds the marginal cost. Policies should focus on reducing the price of health care services instead of reducing the quantity. Moreover, efforts should be made to insure the uninsured population. (Nyman, January 4, 2001).

2.8 Studies for Pakistan

Aamir and Ahmed (2013) investigated the level of awareness of private health insurance in Pakistan and also estimated the willingness to buy it. They also examined the barriers in the development of health insurance. Role of insurance agent turned out to be the most significant barrier. Results showed that marital status, occupation, monthly house hold income, monthly medical expense and number of hospital visits in last year are correlated with willingness to buy health insurance. While age, education, number of dependents had no effect on the decision to purchase health insurance.

Jahangir and Haq (2015) investigated the willingness to purchase health insurance in Pakistan. The results revealed that 12.4 % of uninsured were willing to purchase health insurance. Households, economic status, illness in family, residence turned out to be the significant factors. The findings of this study confirmed that people are willing to contribute in health

insurance. They suggested that national health insurance program can be initiated. The development of health insurance will improve the health status of the people. The risk of moral hazard that is excessive utilization of services can be controlled by introducing coinsurance and deductible. People who were willing to purchase health insurance preferred private providers because of perceived better quality.

Nabeel and Chaudhry (2013) examined Microinsurance in Pakistan. Benazir Income Support Program (BSIP) is the main source of Microinsurance policies. Mainly the policies offered are credit life policies. These policies cover expenses after the death of borrower. Rural support program offers policies that cover the hospitalization cost of borrower and their spouse. No doubt the sudden death and catastrophic expenditure due to unexpected illness are the dangers to the economic stability of the family, which explains why Microinsurance first tried to address these issues. But the impact of Microinsurance is still not known. Results have shown that utilization is low. When providers were inquired about the low utilization they explained there is lack of awareness among beneficiaries about benefits and coverage. They suggested that Microinsurance can be expanded by providing health Microinsurance coverage to whole family of the microcredit borrowers and by offering HMI to all of the community members of rural support program. Automated digital payments can be introduced through partnering with mobile phones. This will reduce transaction costs and would ultimately increase the customer volume.BISP data base can be used to highlight the poor household above BISP threshold and those can be benefited by the partially government subsidized Microinsurance policies.

Abrejo and Shaikh (2008) studied social health insurance in Pakistan. They explained that many developed countries have used insurance to address the health challenges of their societies. Developing countries are struggling to make a strong and successful model of social health insurance comparable to the insurance plan of European or Scandinavian countries. Government of Pakistan has been facing problem in providing health services to ever growing population. Majority of the population preferred to go to private sector. Current scenario has made the health care a luxury. The researcher recommends launching pilot initiatives of social

health insurance. This will provide suggestions to expand social health insurance all over the country.

Conclusion and research gap

Pakistan is struggling to find solution to health problems. My study will help to find the weakness in existing health insurance system. It will investigate the willingness to pay for supplementary health insurance among the households of Islamabad and Rawalpindi. People who will be willing to purchase the supplementary health insurance would be the ones which are unsatisfied with the current services. Very little research is done in this context in Pakistan. Literature provides proof that developed nations has used health insurance to address the issues of equity and quality of health care services. Moreover in this way to a successful health insurance plan every nation has faced issues such as moral hazard. Health insurance system of Pakistan is described in detail in this study. Findings of the study will be useful in estimating the premium which would be affordable by the people.

CHAPTER 3 HEALTH INSURANCE SYSTEM IN PAKISTAN

In this chapter health insurance system Pakistan is discussed in detail.

3.1 Health Insurance industry in Pakistan

The insurance company is not developed in Pakistan. In December 2011, the revenue earned from industry's total premium was PK124 billion or USD1.29 billion.

The restrictions on the insurance industry are fairly less. The capital requirement is USD4 million and insurance companies are required to bring at least a minimum of USD2 million foreign exchange and to raise an equivalent amount from local market. The least capital requirements have been increased at a considerable manner which are PK300 million for non life and PK500 million for life insurers.

At present, there are 39 non-life insurers' operators in the market including three general Takaful operators and one state owned company. Top three players accounts for 65% of the written premium. In the CY2011, the industry grew by 16 percent and the total premium of the non-life insurance sector was PKR54 billion. Moreover, government owned reinsurer earned from a mandatory minimum 35 percent share in the treatise of the non-life insurers.

Two health insurance companies are working in the market along with two foreign life insurance companies and two non life insurance companies.

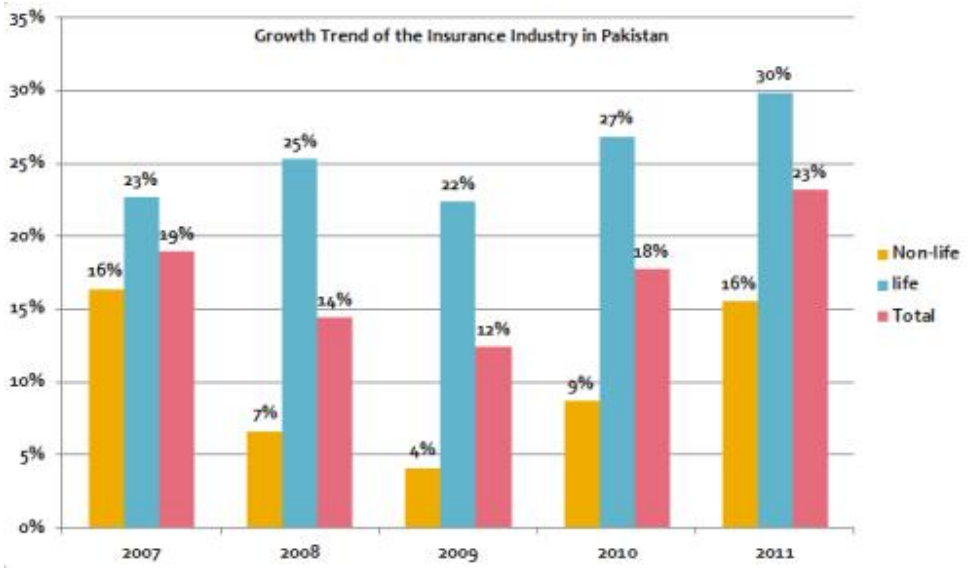


Figure 3-1 Growth trend of insurance industry in Pakistan

Source: Securities and Exchange Commission of Pakistan, 2016*

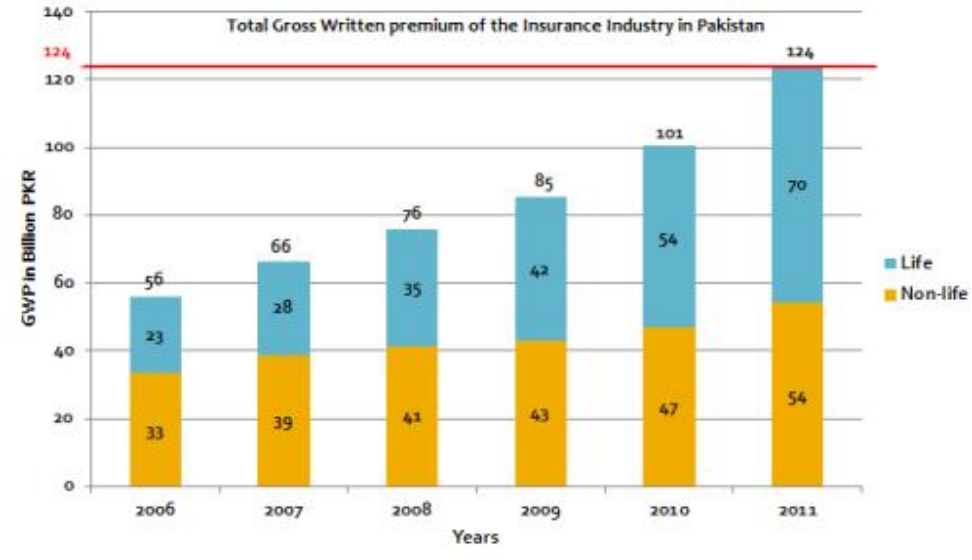


Figure 3-2Total gross written premium of the insurance industry in Pakistan

Source: Securities and Exchange Commission of Pakistan, 2016*

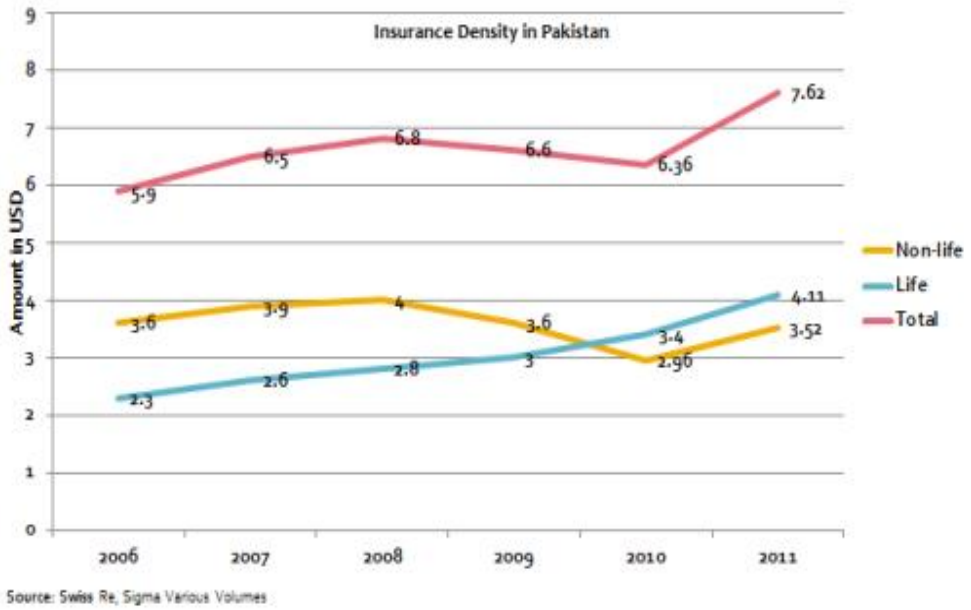


Figure 3-3 Insurance density in Pakistan

Source: Securities and Exchange Commission of Pakistan, 2016*

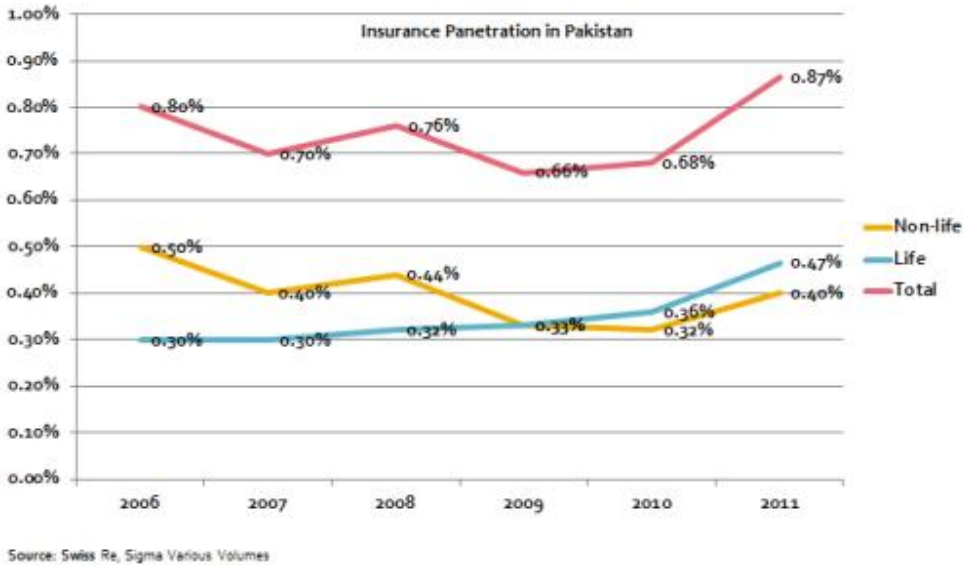


Figure 3-4 Insurance penetration in Pakistan

Source: Securities and Exchange Commission of Pakistan, 2016*

3.2 National health insurance program by prime minister of Pakistan

Prime Minister Muhammad Nawaz Sharif on 31st December 2015 launched a health insurance program in Islamabad. Prime minister described it a healthy step in making Pakistan a Welfare state. Pilot project was firstly launched in Islamabad and it will expand to all over Pakistan. In first phase the scheme was started in 15 districts of Islamabad and in second phase scheme will be extended to other 23 districts. In first phase almost 1.2 million families were enrolled. The prime minister claimed that this program will benefit 3.2 million families from Punjab, Baluchistan and FATA in the two phases. Moreover social mobilization campaign would be used to enroll all eligible people in the scheme.

3.2.1 Launching Phase

In initial phase program is started in fifteen districts all around the country.1.2 million people will be enrolled in the program in first phase. Nine billion rupees are allocated for this purpose. People who earn less than 200 rupees per day will be eligible for enrollment. In the launching phase 3.1 million people will be benefited from this program. In future it will be expanded and families below poverty line will be included in it. The districts included in this program are Narowal, Khanewal, Sargodha, Rahim Yar Khan, Sheikhupura, Badin, Shaheed Benazirabad, Sanghar, Mardan, Malakand, Kohat and Chitral. In addition Quetta, Loralai, Lesbela, Kech, Muzaffarabad, Kotli, Diamer, Skardu, Bajaur Agency, Khyber Agency and ICT are also included.

Treatment Packages

Secondary Care PKR 50,000	Priority Treatment PKR 250,000
• In patient services • Emergency treatments need hospitalization • Normal delivery and C-section • Maternity consultancy 4 times before and one after childbirth • Fractures / Injuries. • Post hospitalization. • Local Transportation Cost of PKR 350 (thrice per year). • Provision of transport to tertiary care hospitals.	• In Patient Services (All Medical and Surgical Procedures). • Heart diseases (Angioplasty/bypass) • Diabetes Mellitus • Burns and RTA (Life, Limb Saving Treatment, implants, Prosthesis) • End stage kidney diseases/ dialysis • Chronic infections (Hepatitis/HIV) • Organ Failure (Liver, Kidney, Heart, Lungs) • Cancer (Chemo, Radio, Surgery)

Table 3-1 Treatment Packages

List of Hospitals

Secondary treatment hospital	TERTIARY/REFERRAL TREATMENT HOSPITALS
• Rawal general and dental hospital • Al Nafees medical college and hospital • Life care hospital Islamabad • Begum Jan hospital • Kashmir surgical and general hospital • Muzaffarabad general hospital • Pima Al-hajiri hospital • Rahat medical complex hospital • Haji sangeen khan memorial hospital	• Al Shifa International Hospital • Rawalpindi Institute Of Cardiology • Pakistan Institute Of Medical Sciences

Table 3-2 Lists of hospitals

3.3 Punjab Employees Social Security Institution

Employers having 5 or more employees are legally obliged to register for this scheme. This insurance model is different. Punjab social security system was first established in 1965.It is operational since 1967.All those workers with salaries below Rs 15000 per month or Rs 600 per day are eligible to enroll in this plan. Employers have to pay premium on the behalf of employee which is 6% of the salary of the worker.

3.3.1 Framework of social security system

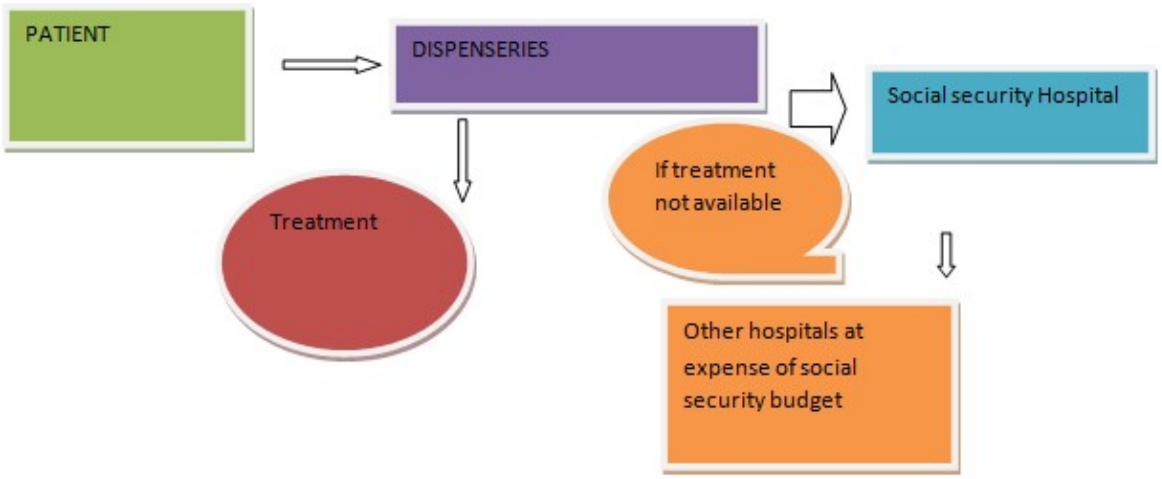


Figure 3-5 Framework of Social security system

Overall, PESSI has 282 medical units which include emergency centers, dispensaries and Hospitals. Basic medical facilities are available at the dispensaries such as gynae and pediatric facilities. Hospitals provide coverage to almost all diseases and family planning services. The hospitals and their capacity are as follows

Sr no	Name of hospital	No of beds
1	Nawaz Sharif Social Security Hospital, Multan road Lahore	550
2	Social Security Hospital, Faisalabad	300
3	Social Security Hospital, Islamabad	260

4	Social Security Hospital,Shahdrah	100
5	Social Security Hospital, Gujranwala	100
6	Social Security Hospital, Multan	100
7	Social Security Hospital,Sailokot	100
8	Social Security Hospital, Okara	50
9	Rehamtul-lil-Alameen Institute of cardiology, Multan, Road Lahore	60
10	Social Security Hospital, Sheikhupura	50
11	Social Security Hospital, Kot lakhpat	30
12	Social Security Hospital,Jauharabad	25
13	Social Security Hospital, Sahiwal	10
14	Social Security Hospital,Gujrat	100
15	Social Security Hospital,Jaranwala	25

Table 3-3 Number of beds in hospitals

3.3.2 Differences between Social Security and other health insurance programs.

Social Security	Health insurance
• Employer is paying the premium.	• Premium is paid by the consumer.
• 100 percent coinsurance.	• Insured has to pay the premium.
• No out of pocket spending.	
• Fare is also given.	• Some payments have to be made by insured.
• Meal is free that is during visit 150 rupees per day are provided for meal.	•
• There is income limit that up to 15k can be registered.	• There is no income limit.
• Pooling effect is not prominent.	• Insurance companies are motivated to enjoy the pooling effect because of its benefits.
• Serving the poor labor.	• These systems are not for any particular group of society.
• This system serves the one particular group of the society.	• Employer does not pay the premium.
• Four parties are involved	

i.e. Ministry of labor, Industrialists, social security setup, Labor. • The industrials are bound by law to register their employees if they have 5 or of them.	• There is no such law but policy makers have realized the need of health insurance systems. So they are trying and thinking about implementing this system.

Table 3-4 Differences between social security and other health insurance systems

3.4 Waseela-e-Sehat Initiative of Benazir Income Support Program

Waseela-e-Sehat is the initiative of Benazir income support program (BISP).It comprises of Health insurance and group life insurance. The pilot project had been started in 2008 in District Faisalabad. The health insurance Model (HELP) would be operated through insurance companies selected by competitive bidding of premium for provision of service in district designated by BISP.The scheme would need collaboration of BISP,participating insurance companies, federal and provincial health authorities, the health care providers and beneficiaries linked by information technology with chip enabled card. IT based enrolment system through “smart cards” is established with the help of NADRA for beneficiaries. The insured families would be given a chip enabled card which would contain personal details of family members and biometric details of head of family. The success relays on the vigorous information technology platform with chip enabled cards. The cards would reduce the chances of fraud. The selected insurance companies with smart card vendors would issue card to the beneficiaries and would allow them to avail the services. The federal Health ministry would play the stewardship role. Approximately fifty nine thousand beneficiary families were enrolled in the pilot project and in two years 8 hospitals were empanelled. Records have shown that ten thousand.

3.4.1 Eligibility Criteria.

- In possession of National identity card by female beneficiary.
- Monthly income less than Pakistani 6k.
- BISP female beneficiary, her spouse and dependent children would be enrolled.

3.4.2 Premium

The premium is Rs 500 per annum but this would be selected by risk carrier selected by BISP.

Dr Inam and Iftikhar (2011) in their recent paper said that premium for scheme is expected to be in the range of Rs 1500 to Rs 2000 per insured family annually and will be paid in advance.

3.4.3 Benefits

- Hospitalization due to illness and injury up to the limit of Rs 25k a year.
- Pre-existing diseases and all age groups will be covered.
- For each admission, the family would be given minimum official wage of week (Rs 1500) as a compensation for lost earnings.
- Inpatient treatment
- Outpatient diagnosis would be covered if they lead directly to hospitalization.
- Normal deliveries and hospitalization due to complicated deliveries and C-section.
- Referral benefit subject to deduction from total benefit in case treatment is not available in the residence of insured.
- Diagnostic tests/procedures conducted during hospitalization would be covered.

3.5 Micro Health Insurance by Sindh rural Support Program

Government of Pakistan is trying to protect rural and workers of informal sector against unexpected catastrophic health expenditures. Poor health and unexpected medical expenditures are one of the factors that push people under the poverty line. According to recent research in this context 65% of the poor population in Pakistan has health issues and relevant expenses are making them more poor.

According to the report of World health organization, the out –of –pocket health expenditure in Pakistan are 71 %.WHO has also revealed that the people who are unable to afford paying for medical services get the worst quality treatment. More than 50% of the population is below the poverty line and 65% has no access to health services. Disease prevalence is high in poor people.

To address these issues Sindh rural support program has introduced a micro health insurance program at very reasonable premium.

Micro health insurance is among the most prominent feature of the poverty reduction plan of SRSO.It is used as a risk management tool for the poor people of the country under financial crises.

In October 2005 SRSO started this program with the collaboration of Adamjee Insurance Company Ltd.MHI covers the hospitalization cost, accidental injuries, disabilities and compensation to the family members after the death of head of household. Those household are eligible who fall in 0-18 category according to the poverty scorecard survey. Family size doesn't affect the eligibility criteria. Limit for daycare, hospitalization, maternity care, accidental death and disability is 25000 per person for the year.

In 2007 the SRSO introduced a second product named as MHI credit policy for enrollees. This policy coverage is Rs 15000 a year at an annual premium of Rs 150.Family package was launched in 2008 which provide coverage to whole family and dependents of age less than 18

years. The coverage limit for this plan is Rs 15000 at an annual premium of Rs 600.This package also provide Rs 7500 to cover maternal expenditure.

Moreover, Adamjee Insurance company took an initiative in a name of Sehat Salamat Card for the poor insured families .This card enable them to use services worth of Rs 15000 in the nearest panel hospitals. The panel hospitals provide free service to the policy holders who have to show Sehat Salamat Card to access this cashless service or the receipt issued by SRCO and the national ID card of the patient.

3.6 Microinsurance in Pakistan

Microinsurance market in Pakistan is under developed. According to Chaudhry and Nabeel (2013) the number of policies in Pakistan is nearly 7.4 million. They explained that is best estimate they could get. This estimate does not include ongoing pilots such as life insurance policies by Pakistan post, life and disability Microinsurance and Microinsurance by mobile phone companies (Zong and Telenor).

Province	Microcredit-linked microinsurance (credit life and health)	BISP life	BISP health	Naya Jeevan (approx.)	Other private HMI	Total
Punjab	2,172,808	1,355,785	319,911	3,000		3,848,504
Sindh	555,860	1,617,879		19,400		2,193,139
KP	53,445	862,278		1,000		915,723
Balochistan	6,937	208,966				215,903
AJK	46,087	68,818				114,905
Gilgit-Baltistan	10,135	24,424			32,832	67,391
Unknown						
Total	**2,854,194**	**4,138,150**	**319,911**	**23,400**		**7,368,087**

Figure 3-6 Microinsurance policies in Pakistan: December 2012 to January 2013

In Pakistan Microinsurance is at initial stages. Most of the current Microinsurance policies operational in Pakistan are offered through Benazir Income Support program and others are offered by microcredit institutions, microfinance banks, on government organizations and rural support programs. Microcredit sector mostly provides credit life policies.

Moreover, rural support programs are providing health insurance policies.

Securities and Exchange Commission of Pakistan the contribution of whole insurance industry was only 0.7 % of GDP in 2010. According to World Bank report 1.9 % of the Pakistanis are enrolled in some form of insurance coverage (Nenova, et al., 2009).

In 2007 the total number of policies was 387900.In 2012 1.2 million and 1.6 million people had coverage by credit life and health insurance policies provided by microfinance sector (Pakistan Microfinance Network, 2007, 2012).Rural support programs offered 42% of the policies. While 68% policies were provided by other microfinance providers.

In 2011 11 of the micro credit providers offered credit life policies and 7 of them provided health Microinsurance schemes ((Pakistan Microfinance Network, 2011).

3.6 .1 HMI INITIATIVES IN PAKISTAN

3.6.1.1 DISCONTINUED PROGRAMS

HMI providers	Duration of program	Description
Kashif foundation	2007-2008	In 2007 pilot project was initiated at premium rate of Rs 350 per person. This program was mandatory to the borrowers of pilot branches
FMiA	2007-2011	Premium was charged on the basis of location and partner organization. It was started at premium rate of Rs 350 per person

	for coverage of Rs 25000 in 2007.FMiA was closed due to issues of feasibility. But Jubilee life still provides health insurance collaboration with COs.

Table 3-5 Discontinued programs of HMI initiative

3.6.1.2 ON GOING PROGRAMS

HMI providers	Initiated	Description
Tameer/Asian Care	2010	HMI was offered through collaboration with Asian Care at the premium of Rs 650 per annum per person for coverage of Rs 35000.Coverage doesn't include family members and spouse. It is self policy.19000 health policies were sold in 2012.ijy7
Naya Jeevan/Saudi Pak,Pak Qatar,Allainz-EFU,IGT,Warid telecom	2010	Two products • Employer or co-financed is for employees with low income working in formal and informal sectors. The people have income up to 20000 are eligible to enroll in this program. Employer pay premium on behalf of employee. The amount of premium is Rs 200 per worker for coverage of Rs 150000.This program enrolled 24000 people in June 2013. • Self insurance product provides coverage to low income people .Enrollees have to pay premium of Rs 150 per person per month. Naya Jeevan plans offer health insurance through collaboration of mobile network with Warid telecom
Asasah/Jubilee	2011	This product is mandatory to all micro credit clients. Premium

Life		for coverage for Rs 50000 is Rs 650.It provides coverage to policy holder and his/her spouse.Hospitalizied normal deliveries are not included in the coverage but C-section and hysterectomy are included. The number of enrollees is 5584.
BISP/State life insurance	2012	Pilot project was started in April 2012 and 50,000 families were included in it. The amount of premium is Rs 2250 for coverage up to Rs 25000 for all family members. Government of Pakistan pay premium for enrollees through poverty scorecard.
Pak Qatar Takaful	2011	
Zong/Adamjee life		
PPAF and partner organization: **PPAF/SAFWCO** **PPAF/JWS** **PPAF/BRAC** **PPAF/RCDs**	2011	PPAF launched pilot projects with the collaboration of its partners: JWS in Gujranwala and Hafizabad, RCDs in Sheikhupura and Nankana shahib and SAFWCO.It provide coverage to 13000 people in a year.PPAF also run pilot project with partnership of BRAC for district Lasbela in Balochistan.It covered 15000 people. The results weren't clear. Some partners didn't stop the project after pilot(PPAF,2012)
FMFB	2009	Started HMI in collaboration with Jubilee life in Karachi and northern Punjab. Premium is different in different areas. The amount of premium in Karachi is Rs 800 per year for whole family. While in northern Punjab the amount is Rs 950 to Rs 1000.The coverage is up to Rs 50000 for each family member but only for hospitalization. The policy holder parents are not

		included in the coverage. For first three months 50% reimbursement of pre existing conditions and later whole amount is reimburessed.For FMFB micro credit clients health insurance is mandatory.
Rural Support program Network (RSNP)/Adamjee	2005	It is first program that provides hospitalization and accidental coverage to the poor people of rural population in the country. There are ten rural support programs in Pakistan. Among them 6 provides HMI. Health insurance coverage includes cost of hospitalization, accidental injuries, compensation for disable people, and compensation given to family member in case of accidental death. Limit for hospital stay is 25000 and total is 50000 for each insured person. Out of 50k, 25k is for accidental death. Maternal expenses and transportation costs are also covered. In June 2012 total number of enrollees was 3380609.
NRSP		NRSP is the biggest contributor in HMI programs. It accounts for about 50% of the policy holders .The amount of premium is Rs 100 for policy holder and his/her spouse. The program provides coverage for hospitalization, accidental death and permanent disability. The annual limit is Rs 15000.The number of policy holders was 2379905 in June 2012.
Aga Khan rural support program		In the second quarter of 2012 the number of enrollees was 621,184 (RSPN Outreach, issue 14).
Sarhad rural support program		SRSP took an initiative of HMI with the objective of providing health insurance to 32000.The program was part of Bacha khan poverty alleviation. In second quarter of 2012 the number of

		policy holders was up to 27400.
Sindh Rural Support Organization		In second quarter of 2012 the number of enrollees was 204696.
Thardeep Rural Development Program		In second quarter of 2012 the number of enrollees was 127409.
Ghazi Barotha Taraqiati Idara		In second quarter of 2012 the number of enrollees was 20075.
Kashf Foundation	2013	• Coverage for whole family • Beneficiaries can use free of cost services from panel hospitals.
Khushhali Bank	2013	Pilot project was started with the collaboration of Asian bank.
NRSP/Adamjee family coverage		
Daamen	2013	

Table 3-6 Ongoing programs

3.6.1.3. Issues in different types of health insurance systems operational in Pakistan

PESSI

What are the issues and challenges faced by this system?

- Electricity and gas shortage.
- Moral hazards on part of industrialists.
- Exploitation by the percentage of employees who utilize the service.
- Unawareness and trust issues by employees on government services which leads to less utilization by a large labor proportion.
- No role of hospital administration in decision making.
- Industries are shutting down and industrialists are moving their businesses from Pakistan.

Currently system is facing deficit. Which could be reduced if the premium will increase or it would be better if the general premium system is followed which is that consumer has to pay the premium. But the consumers are very poor so it would be very hard for them to pay 7 percent per month. But people would be more aware of the services and facility provided. They would know the worth as they contribute a share. And also industrialists will register there all eligible employees. Pool will increase but for that system has to expand. There could be a scenario where this system would expand the eligibility income and people above certain limit would pay the premium and below 15k would be enjoying the facility as usual. In that case pool will increase so the system can enjoy the pooling effect which gives more good results as it increases. To bring such a change isn't possible as there is lot of steps involved and the ultimate decision is by ministry of Labor. The profit earned is used to buy saving certificates. The interest earned is utilized to face the challenges and deficit. The narrator claimed that the system is crumbling and interest earned from saving certificates is supporting it otherwise system it would have been crashed. Hospital administration has no role in decision making regarding the social security system set up. They are responsible for providing services.

Financial department

Total budget of Pakistan during 2013-14 is Rs 3.5 trillion and in this 3.5 trillion, only Rs 35.6 billion is allocated for health sector. And in this Rs35.6 billion allocated amount, Rs9.9 billion is for health and services and remaining Rs 25.7 billion is for "public sector development program". This budget is for 17 ongoing schemes and one new scheme. And for ongoing "National food security" 750 million is allocated. In 2012-13 budget only Rs 22 billion were allocated for health. This shows that for whole year only Rs 194.6 is allocated per person which is very poor condition. To fulfill this gap lot of private insurance companies come in the field.

BISP

In the pilot phase BISP paid Rs 2250 to SLIC per family per year. This program had special arrangement with SLIC: 5% of the total premium paid by BISP went to SLIC and the remaining 95% of the profit went back to BISP.Efforts were done to lower the premium and BISP successfully negotiated the premium to Rs 1800 for other districts.

49000 cash grant enrollees from six district tehsils received in patient care in 2012 in Faisalabad. The program covered six members of a beneficiary up to Rs 25000 per year. Eight hospitals were on panel.

Challenges

- Low coverage

  Coverage was rather small but up to feb2013 only six families crossed the upper limit. Only important diseases are covered.

- Distance to panel hospitals

  In Faisalabad the average distance to hospitals for beneficiaries was 5 to 10 km but in other districts proximity to the hospitals might be an issue.

- Low hospital utilization

  Enrollees claimed that the requests for hospitalization were denied by the SLIC doctors.

Microinsurance

Microinsurance is not mandatory; percentage of people enrolled is fairly low. Churchill and McCord (2013) found that the take up rate of health insurance is 6% to 36% in developing countries. The people don't have knowledge about how much coverage they need? And therefore they don't purchase the required level of insurance. Moreover, it is not necessary that people will participate in free insurance. Some people hesitate to enroll in such programs all around the world (Berhein, et al.,)

In some cases, the screening process for eligibility criteria by insurance companies is challenging but not always as research has shown that 20% of uninsured have household income greater than $75000 .Baicker et al, (2012) found out that 25% to 75% of the uninsured in US didn't get enrolment for insurance Inspite of being able to afford it. The significant factors that determine this decision are complexity, perception of risk, present bias.Ito and Kono (2010) studied population in India where the participation in HMI was very low. They found that people were risk loving in reference to loss. This leads to underinsurance. Data collected in this context decreases the hopes that insurance penetration can expand to high level in developing countries due to low financial literacy. According to McCuinnes and Mandel (2010) only 13% families were enrolled in FMiA's HMI program. To increase the number of enrollees NRSP had to take certain steps. Program was linked to the lending operations and cost of premium was reduced.Tameer's health insurance had 19000 clients out of 155000 active borrowers in 2013.People didn't like mandatory nature of HMI pilot of Kashif. The private health insurance model is small and interest of BISP eight insurance companies gave their bids. Only four of them qualified the criteria by World Bank. Only one company agreed to provide reimbursement system rather than cashless system suggested by BISP.

Private companies were reluctant to provide health insurance to extremely poor people and for premium they proposed a bid which was three to four times higher than what BISP paid to SLIC.This was because insurance companies has lack of information about the risk of being insured and thin insurance market. So SLIC succeeded in getting government funding to provide BISP HMI.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 Chapter Overview

The basic purpose of the study is to achieve objectives, to get accurate result or to explore research questions. For carrying the successful research it is essential for researcher to develop an accurate methodology. This chapter is intended to show research methodology used for primary data collection is given in this chapter. Moreover, limitations of the research work, population size and sampling design of the research work are mentioned in this chapter.

4.2 Introduction

In this section research method will be explained in detail. The population of the study consists of private and public organization in Rawalpindi and Islamabad. These include Centaurus Mall, National agriculture research council (NARC),Askari bank I 10 branch, Allama Iqbal open university, Punjab employees social security hospital IJP road, American embassy,OGIT,Zong chakshehzad branch, Pakistan institute of development economics, State bank,F.G school I-10/2 ,Pakistan telecommunication cooperation limited were the randomly selected organization from which data was collected. Face to face interviews were conducted.Quantative data collected was analyzed using descriptive and contingent valuation method.

4.3 Research Design

Quantitative research method was used in this study. In this method features are classified, counted and then information gathered is explained with the help of statistical methods.

Data was collected through survey. Questionnaires were used to gather information from the people. There are two types of survey research which are sample survey or census survey. In a sample survey data is collected from the subset of population. While in census survey data is collected from each and every member of the population. This study is a sample survey. This approach is more convenient and saves time and money.

4.4 Research limitations

The major limitation of this study is that the findings cannot be generalized to whole population. But the findings are valuable in many aspects. It examines the willingness of people to buy supplementary health insurance and the results have shown that people are discontented with the system in which they are enrolled.

4.5 Data Source

This study uses the data of 200 respondents. Due to limitation of time and resources data was divided in two clusters Rawalpindi and Islamabad. Then simple random sampling was used to select the participants.

4.6 Methodology

The analysis is based on dichotomous dependent variable which has two options willingness to purchase supplementary health insurance or not. This study examines the effect of several household characteristics family size, number of years of educations, age, income, health status, unanticipated expenditure, health care utilization and willingness to purchase supplementary health insurance.

The measure of unanticipation use in the model is the residual from regression of the log of anticipations on all other measures in the demand model.

The study use Probit regression to examine the impact of independent variables on dependent variable that is the willingness to buy supplementary health insurance. The general form of the model is as follows

$$Y = \alpha + \alpha_2 lnHHI + \alpha_3\ lnage + \alpha_4 LnYe + \alpha_5 fs + \alpha_6 lnHS + \alpha_7 AE + \alpha_8\ city$$

Y=willingness to pay for supplementary health insurance

Lnhhiy=Log of income of head of household

Lnage=log of age of respondent

Lnye=log of years of education

Lnfs=log of family size

LnHS=log of health status

AE= unanticipated expenditure

City=city of the respondent

CHAPTER 5 DATA COLLECTION

5.1 Chapter overview

This is reserved for collection of required primary data collection has discussed in the given chapter. Summary of primary data collection process through survey and interviews is mentioned in this chapter.

5.2 Data collection Method

According to Onwuegbuzie & Leech (2005) data collection is process of getting information about the matter under consideration. The questionnaires composed of different sections. Section A consists of questions regarding personal bio data. Section B includes inquires related to payment mechanism. Section C is about willingness to buy supplementary health insurance. Section D is Eq -5D health questionnaire.

Majority of the questions are close ended in which respondent has only two options yes or no

5.3 Research procedure

A questionnaire design was made according to the research questions. The reliability of the questionnaire was checked before the actual survey. For this purpose pilot survey was conducted. The 5 respondents were selected for it. The people who participated in pilot survey were not included in the actual survey. Later, after collection of complete data Cronbach's alpha test was used to check the internal consistency of questionnaire. The 0.7 or higher value Cronbach's alpha coefficient is required for tool to be reliable .The result of the test is shown below.

Reliability Statistics

Cronbach's Alpha	N of Items
.845	200

Table 5-1 Cronbach's alpha test

The above table has revealed that value of Cronbach's alpha is 0.845 which means that the questionnaire used is internally consistent.

After pilot survey it was found that the respondents had difficulty to answers the questions regarding willingness to exceed upper limits on health care utilization. So contingent valuation format was used in the questions.

Face to face interviews were conducted with every participant. Care was taken to minimize the bias.

Data was collected in September to December 2015.Structures questionnaires were used to collect the primary data. Formal permission to conduct survey was taken from each organization. Firstly management was approached via email or phone call and in some cases I had to arrange meeting with the authorities. Proper consent was obtained before survey was conducted in the premises of the organization.

5.4 Data Analysis

5.4.1 Elicitation Method

Contingent valuation method is a survey based economic technique used to estimate the value of good. In this approach maximum willingness to pay is evaluated by asking respondents willingness to pay for a hypothetical package. The response will rely on the scenario offered.

There are different formats of CVM questions

Open ended CVM

Respondent is asked to mention any amount they want.

Referendum CVM

Respondent has to vote for the hypothetical referendum.

Payment card question

Respondent has to choose among different amounts given they would be willing to pay.

Iterative Bidding game

This is same as auction. If a respondent say yes to the initial bid a larger bid will be offered until he/she say no and the highest amount the respondent is willing to pay is recorded.

Dichotomous choice

It is closed ended question also know a take it or leave it. Yes or No response is expected out of question.

Double Dichotomous choice

If the respondent say yes to the X than they are inquired if they would be willing to pay 2X.And if answer to first question was no than they are asked if they would be willing to pay ½ X, 1/3 X.

Modified dichotomous choice method

This method was used by Stevens et al (1991).The random amount is given to the respondent and their willingness to pay is recorded for it. They are also asked to choose a higher and lower bid than the initial amount offered.

In this study bidding game format was used. It is known to be more reliable than dichotomous choice method which gives better results with large sample sizes. Respondents were asked to record their willingness to pay for hypothetical supplementary insurance package. They were presented with a bid if they choose to accept the proposed bid the researches increased the bid by 20 rupees till the answers is no. And If the answer to initial bid is no than the researcher will lower the price by 20 rupees and then maximal willingness to pay is recoded.

5.4.2 Opening bid

Opening bid for supplementary hypothetical insurance package was Rs 500 per person. The package offered was for whole family so opening bid was equal to number of family members in each household multiplied by the reference price.

5.5 Variables

5.5.1 DEPENDENT VARIABLES

I focus on the use of health services, tendency of families to exceed the upper limit on out of pocket expenditures during the course of my research and responses to hypothetical questions about willingness to pay for health insurance.

1. **Insurance Choice data**

I will present each family with hypothetical offers to increase the upper limits. Different offers will have different rate of increasing the upper limits. The offers would help to estimate a premium acceptable by families and also shows the level of satisfaction with the current plan in which they are already enrolled.

In a pilot survey it was revealed that it is difficult to answer the questions offering increase in upper limits. So contingent valuation method is also used .Maximum WTO among respondents is calculated by asking respondent's WTP for a hypothetical package. The responses will depend on the scenario offered.

5.5.2 INDEPENDENT VARIABLES

1. **Insurance Plan Variables**

Each insurance plan is represented by premium level, allowance and upper limits.

Measure of Health status

EQ-5D will be used to measure general health of the people. Health status will increase the precision of our estimates of the consumption of medical services. In 1990 the EQ-5 D three level versions was first introduced. It consists of three pages.2 out of 3 consist of EQ-5D descriptive system and the third page comprises EQ-5D visual analogue scale. The EQ-5D descriptive system has five dimensions namely mobility, Self care, usual activities,

pain/discomfort and anxiety/depression. Each dimension has three levels which are no problems, some problems, extreme problems. The respondent has to choose the most appropriate level by ticking in the box. The EQ-5D VAS scale is the self evaluation of one's own health. The respondent has to mark the self rated health on vertical scale with two end points labelled as "Best imaginable health state" and "worst imaginable health state". The numerals 1-3 should not be treated as a cardinal score as they don't have arithmetic properties.

The five dimensions of EQ-5D descriptive system are further composed of 3 levels of problems.

Level 1 corresponds to no problems.

Level 2 corresponds to some problems

Level 3 corresponds to extreme problems.

Total 243 possible health states are defined by this method. Each state is described by 5 digit code. For instance, state 11111 means no problems in all five dimensions.

The EQ-5D index value 1 indicates full health (means "no problem" in all domains), whereas 0 indicates deth.Negative values are also acceptable and the lower bound relies on the country-specific value set used.

2. Unanticipated Expenditures

The unique feature of the data is that it will provide information about the expected future expenditures of the families. Unanticipated expenses will give us the perception of people about their health care needs which we cannot predict based on other characteristics. The measure of unanticipated expenditure used in study is the residual from the regression of the log of anticipations on all other variables used in the model. This variable gives information about the perception of the family about their health care needs.

3. Family size

It is another very important variable. It is generally assumed people with large family size spend more on health. In the study amount of premium proposed was per month and for each family member. So family size affects the decision to buy supplementary health insurance. It was used as a continuous variable.

4. Education

Education is an important variable in estimating the willingness to pay for supplementary health insurance. It is generally expected that educated people are more aware of their health and therefore spends more on it. In this study years of education is introduced as a continuous variable.

5. Income

Willingness to pay for supplementary health insurance depends upon the income of the family. Income of head of household was introduced as a continuous variable. Financial status determines life style and the choices people make. People preferences change when the financial condition gets better.Moslty, poor people are victim of diseases and the unexpected financial burden keep on pushing them under the poverty line. So financial status is an important factor in determining the decision to buy supplementary health insurance.

6. City

Data was collected from Rawalpindi and Islamabad. The difference of opinions was estimated between the people belonging to these twin cities. Literature suggests that region affects the willingness to pay for health insurance. This variable has two categories: Rawalpindi=1 and Islamabad=2.

UNIT OF ANALYSIS

The unit of analysis is family year and I will use family as a unit of observation.

5.6 Theoretical framework

My model is based on the research done on the health insurance Trade between moral hazard and risk sharing by Willard G Manning and M. Susan Marquis. I have made some changes because the structure of health insurance is different in Pakistan. In Pakistan group insurance is common. In private sector the premium is either deducted from the salary of employees or paid by the employer on behalf of employee. The insured will utilize the services throughout the year till the annual upper limit is reached. After that he/she will have to make out of pocket payment to utilize health services. The willingness to buy supplementary health insurance will be estimated from the answers to the supplementary hypothetical insurance.

The decision to purchase supplementary health insurance depends upon

- Family size
- Income
- Health status
- Years of education
- Quality of services people are getting from current setup
- Unanticipated expenditure

The patient will purchase the supplementary health insurance if he/she is not satisfied with the current setup in which they are enrolled. The people who would choose to purchase supplementary health definitely would not be satisfied with the services employer is offering them.

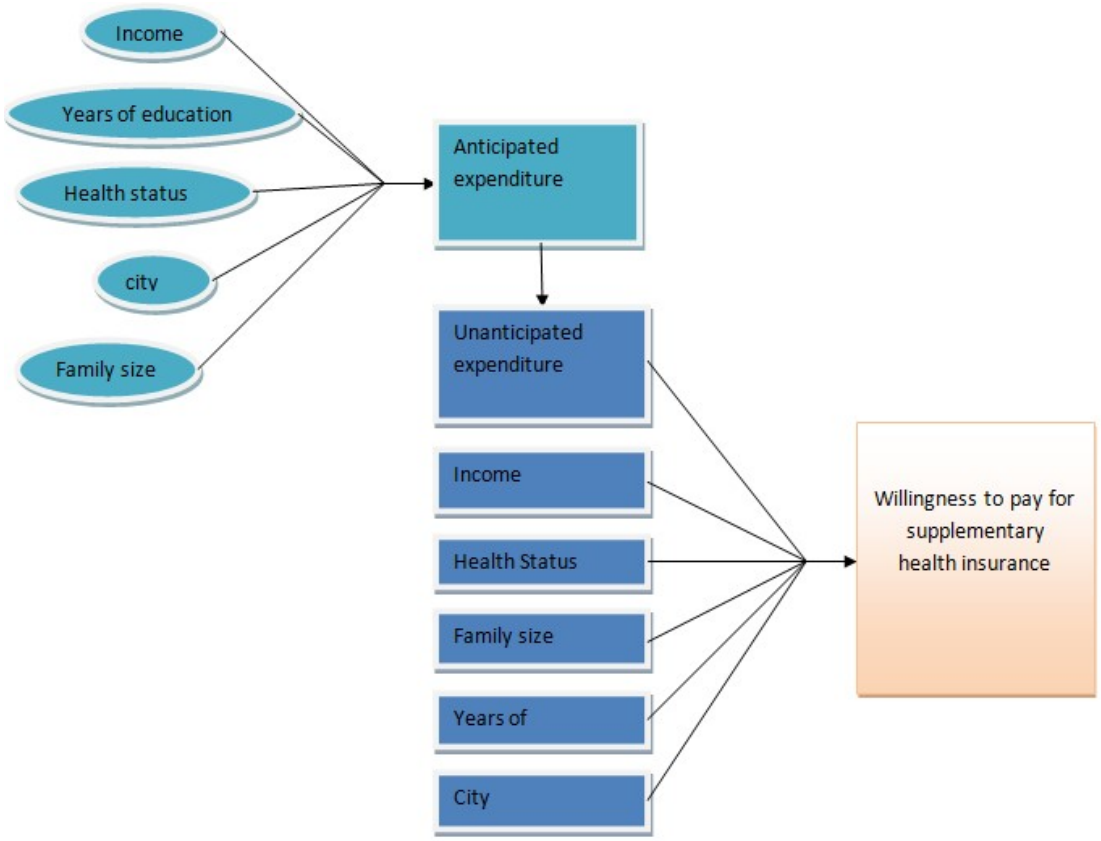


Figure 5-1 Theoretical framework

The measure of unanticipated expenditure used in the study is the residual of the regression of log of anticipation on other variable age, family size, and years of education, city, and health status. Thus this variable gives information about the perception of people about their health care needs. It tells what is known to people about their health and how much importance they give to their health care needs.

CHAPTER 6: DATA ANALYSIS

6.1 Chapter overview

In this chapter the empirical results of the study are discussed. In section 5.1 descriptive analysis of the study is presented. Section 5.2 presents analysis of data. In section 5.3 comparisons of views between the banks is shown. Section 5.4 explains hypothesis. In section 5.5 testing of hypothesis are done and in Section 5.6 interpretation of the result is done.

6.2 Descriptive analysis of the study

Variable name	Categories	Frequency	Percent
Gender	Female	56	28
	Male	144	72
	Total	200	100
City	Islamabad	110	55
	Rawalpindi	90	45
	Total	200	100
Relation to policy holder	Self	196	98
	Spouse	1	0.5
	parent	2	1
	Other relative	1	0.5
	Total	200	100
People covered by health insurance	Yes	182	91
	No	18	9
	Total	200	100

Table 6-1 Frequency distribution of variables

The above table has revealed the descriptive characteristic of the data. A significant portion of sample was of male members.72 % of the total population were males while only 28% of the respondents were females. 55% of the respondents were from Islamabad and 45% were from Rawalpindi.

Reason for no willingness to pay for health insurance

The graph below has revealed that 65.5% of the total population was willing to purchase supplementary health insurance.

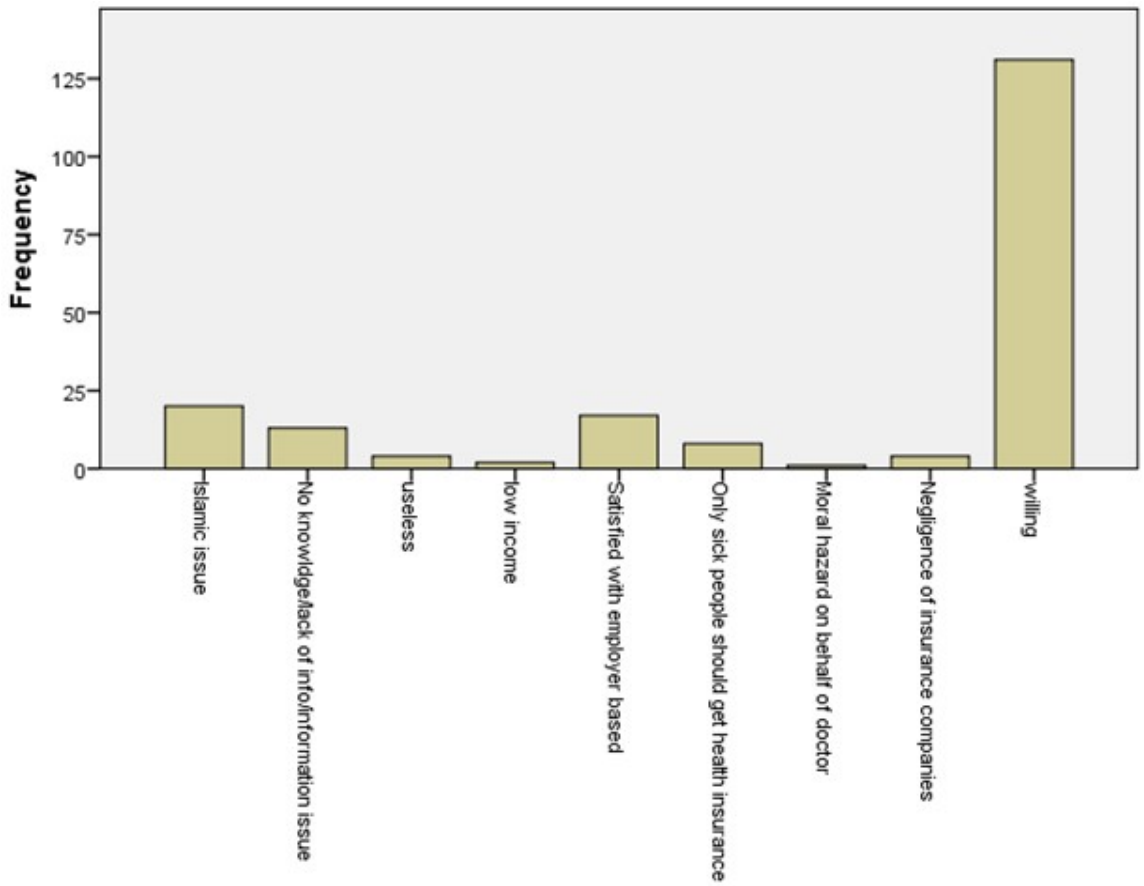


Figure 6-1 Frequency distribution of reasons for no willingness to pay for supplementary health insurance

Of unwilling respondents 28% reported that Islam does not support health insurance .18% did not consider it because of lack of knowledge.24% were satisfied with the employer based health insurance.11.5 % rejected it because they claimed that only sick people should opt it.5.7% considered it useless.5.79% had trust issues with insurance companies.1 % did not support the idea of health because they believed doctors become negligent with enrollees.

		Sex of respondent		
		Female	Male	Total
Reason for no willingness to pay for health insurance	Islamic issue	7	13	20
	Lack of information	4	9	13
	Useless	1	3	4
	Low income	1	1	2
	Satisfied with employer based	4	13	17
	Only sick people should get health insurance	3	5	8
	Moral hazard on behalf of doctor	0	1	1
	Negligence of insurance companies	0	4	4
	Willing	36	95	131
Total		56	144	200

Table 6-2 Reasons for no willingness to pay for supplementary health insurance

	Reason for no willingness to buy supplementary insurance	Frequency	Percentage
1	**Islamic issue**	20	28.98550725
2	**Lack of knowledge**	13	18.84057971
3	**Useless**	4	5.797101449
4	**Low income**	2	2.898550725
5	**Satisfied with employer based**	17	24.63768116
6	**Only sick people should get it**	8	11.5942029
7	**Moral hazard on behalf of doctors**	1	1.449275362
8	**Negligence of insurance companies**	4	5.797101449

6.3 Current set up of employer based health insurance

Variable name	Categories	Frequency	Percentage
Do you have health insurance that covers prescription medicine	No	146	73
	Yes	54	27
	Total	200	100
Does your employer or union pay all, some or none of the cost of your insurance premium?	Yes	170	85
	No	30	15
	Total	200	100
How often do you have to pay premium or amount is deducted from your salary?	Monthly	11	5.5
	No deduction	189	94.5
	Total	200	100
Does your health insurance plan package have limits?	Yes	37	18.5
	No	163	81.5
	Total	200	100

Table 6-3 Current set up of employer based health insurance system

The results have revealed that mostly companies don't provide medicine coverage. Only 27 % of the respondents agreed to the inquiry.

Moreover, majority of the employers pay premium on the behalf of employees.15 % respondents claimed the deduction of premium from their salaries.

Results made it clear that there are very few cases of deduction of premium from salary in the data.

37 % of the respondents worked in companies where health plan had limits.

Allowance

Statistics		
The amount of allowance		
N	Valid	163
	Missing	0
Mean		2446.38
Median		2000.00
Mode		2000
Skewness		1.523
Std. Error of Skewness		.190
Kurtosis		2.586
Std. Error of Kurtosis		.378
Minimum		320
Maximum		8000

Table 6-4 Descriptive analysis of variable allowance

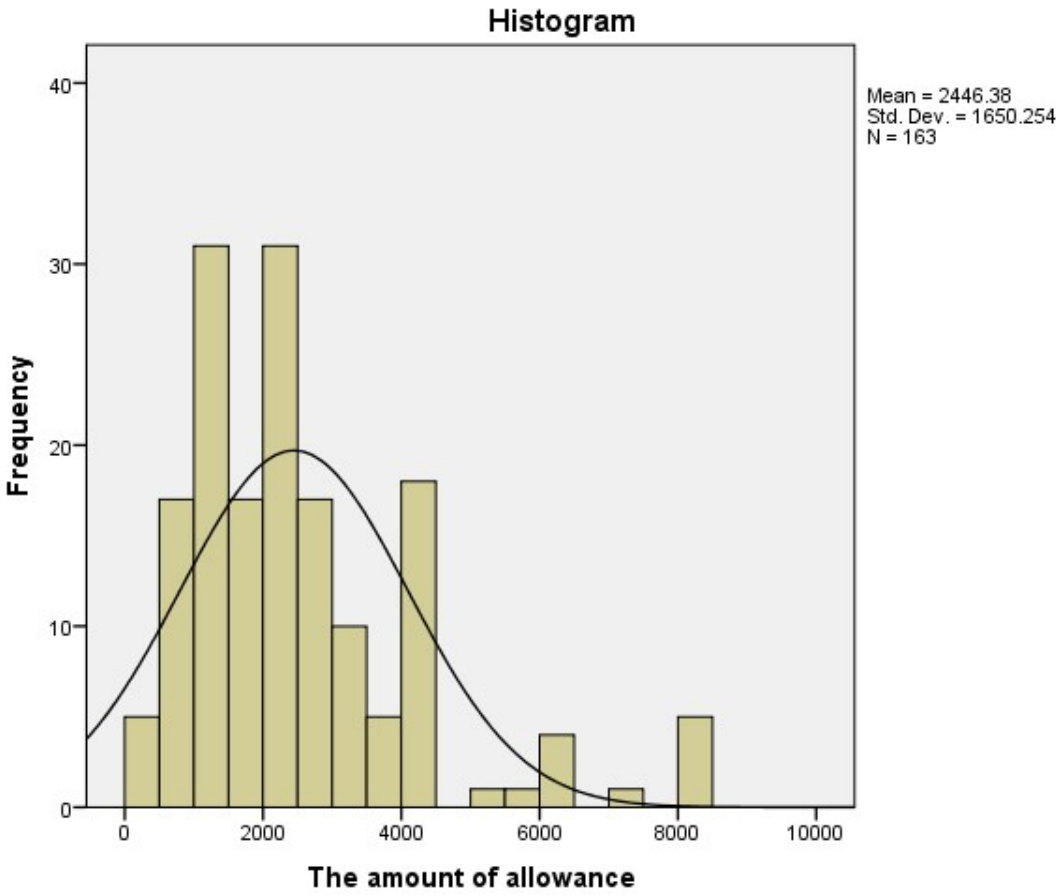


Figure 6-2 The histogram of allowance

The government organizations give monthly allowance to permanent employees. The maximum amount of allowance was Rs8000 and minimum was Rs 320.

6.5 EQ-5D Results

EQ-5D Dimensions		Age					
		25 years and below	26 years to 35 years	36 years to 45 years	46 years to 55 years	56years and above	Total
Mobility	level 1	10.8%	43.3%	23.7%	14.4%	7.7%	96.0%
	Level 2	0.0%	25.0%	50.0%	25.0%	0.0%	4.0%
	Level 3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Self care	Level 1	10.6%	42.7%	24.1%	15.1%	7.5%	98.5%
	Level 2	0.0%	33.3%	66.7%	0.0%	0.0%	1.5%
	Level 3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Activity	Level 1	10.6%	42.7%	24.1%	15.1%	7.5%	98.5%
	Level 2	0.0%	33.3%	66.7%	0.0%	0.0%	1.5%
	Level 3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Pain	Level 1	12.4%	45.1%	22.9%	14.4%	5.2%	75.7%
	Level 2	2.3%	34.1%	31.8%	15.9%	15.9%	21.8%
	Level 3	20.0%	40.0%	20.0%	20.0%	0.0%	2.5%
Anxiety	Level 1	11.8%	44.7%	22.4%	14.5%	6.6%	75.2%
	Level 2	6.5%	34.8%	30.4%	17.4%	10.9%	22.8%
	Level 3	0.0%	50.0%	50.0%	0.0%	0.0%	2.0%

Level 1=no problems, Level 2=some problems, Level 3=Extreme problems

Table 6-5 Health status in different age groups

Mobility

Level 3 has no entries .The people 26 years to 55 years have some issues.50% of the people belonging to age group 36 to 45 years reported that they have some issues in mobility. Overall 4% of the people claimed to have some issues. While 96% of the respondents said they have no problems in mobility.

Self Care

Level 3 has no entries.66.7% of the people belonging to age group 36 to 45 years and 33.3% of the people belonging to age group 26 to 35 years reported some issues with self care. Overall 98.5% of the people said they had no issues in taking self care.

Activity

There are no entries in level 3.98.5% of the people said they had no issue in performing usual activities.1.5 % of the respondents claimed that they experience some problems in performing usual activities.

Pain

2.5 % of the people reported that they experience extreme pain and discomfort.21.8% said that they have moderate level of pain and discomfort.75.5% of the respondents reported that they have no issues of pain.

Anxiety

2.0% of the people said that have extreme level of anxiety and depression.22.8% of the people claimed that they have no moderate level of depression. While 75.2% said they have no anxiety and depression.

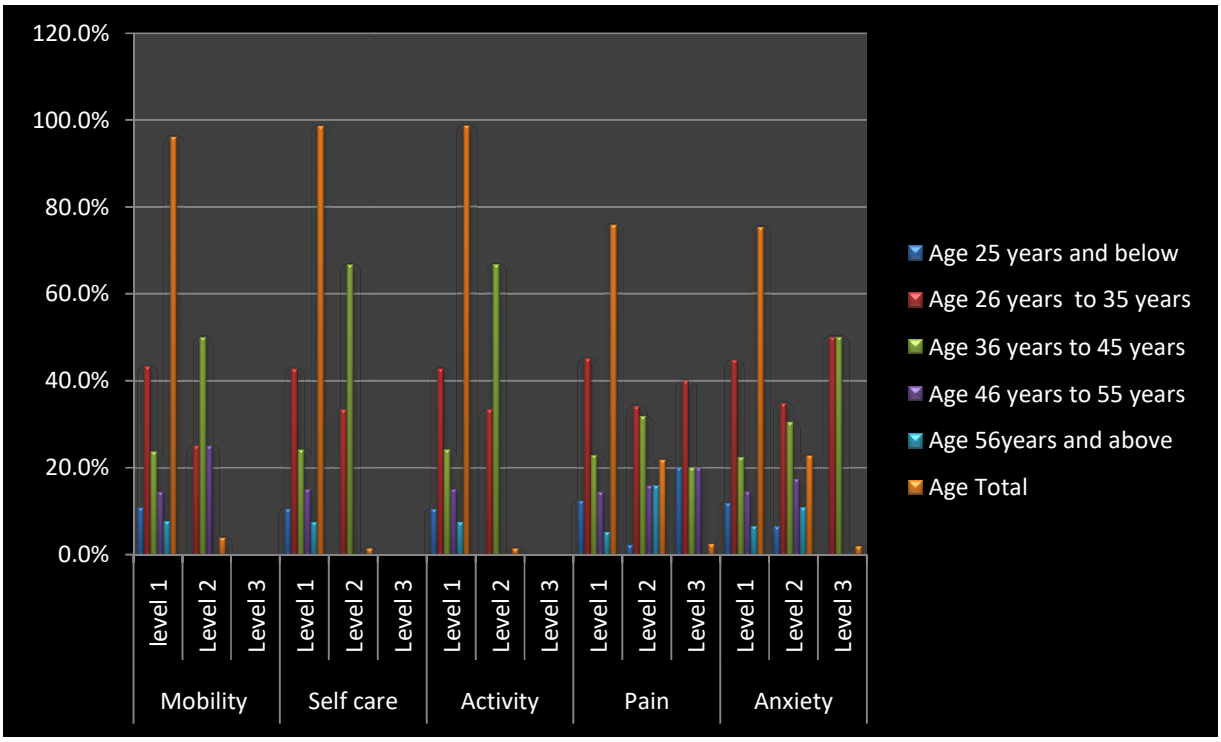


Figure 6-3Health status among different age groups

EQ-5D		Gender of respondent	
		Male	Female
Mobility	level 1	98.6%	89.3%
	Level 2	1.4%	10.7%
	Level 3	0.0%	0.0%
Self care	Level 1	100.0%	94.6%
	Level 2	0.0%	5.4%
	Level 3	0.0%	0.0%
Activity	Level 1	100.0%	94.6%
	Level 2	0.0%	5.4%
	Level 3	0.0%	0.0%
Pain	Level 1	82.9%	57.1%
	Level 2	17.1%	33.9%
	Level 3	0.0%	8.9%
Anxiety	Level 1	82.2%	57.1%
	Level 2	17.8%	35.7%
	Level 3	0.0%	7.1%

Level 1=No problems, Level 2=some problems, Level 3=Extreme problems

Table 6-6 Health status of males and females

Mobility

There are no entries in level 3 for both males and females. But there is clear difference in responses.10.7% of the female complained to have some problems in mobility.

Self Care

100% of the females from Rawalpindi and 94.6% from Islamabad reported that they have no issues in taking self care.5.4% women of Islamabad complained about having some issues with self care. Level 3 has no entries for both Rawalpindi and Islamabad.

Activity

100% of the females from Rawalpindi and 94.6% from Islamabad reported that they have no problems in performing daily activities.5.4% women of Islamabad complained about having some problems. Level 3 has no entries for both Rawalpindi and Islamabad.

Pain

There is difference in responses of male and females.8.9% females complained about having extreme pain and discomfort while no male respondent chose these option.33.9% females and 17.1% males had moderate level of pain and discomfort.82.9% males and 57.1% females answered that they don't feel any pain and discomfort.

Anxiety/Depression

Difference of responses prevails among men and women. Data shows that women have comparatively more health issues.7.1% females claimed to be extremely anxious and depress. On the contrary 0% males fall in this category.35.7% women reported moderate level of anxiety and depression while in case of males the percentage is comparatively low which is

17.8%.82.2% of the males and 57.1% of the females said that they have no issues of anxiety and depression.

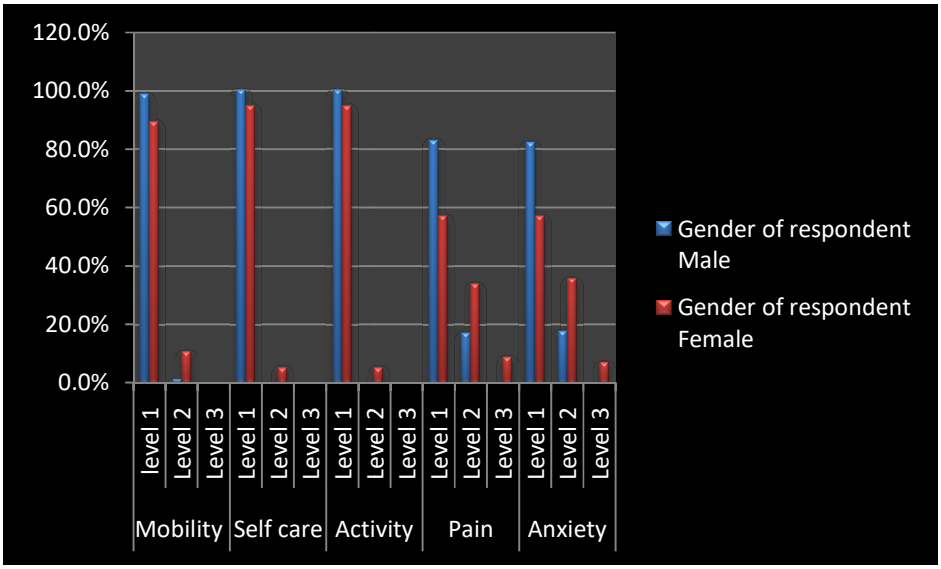


Figure 6-4 Health status in males and females

		City of respondent		
		Rawalpindi	Islamabad	Total
Mobility	level 1	94.6%	97.3%	96.0%
	Level 2	5.4%	2.7%	4.0%
	Level 3	0.0%	0.0%	0.0%
Self care	Level 1	100.0%	97.3%	98.5%
	Level 2	0.0%	2.7%	1.5%
	Level 3	0.0%	0.0%	0.0%
Activity	Level 1	97.8%	99.1%	98.5%
	Level 2	2.2%	0.9%	1.5%
	Level 3	0.0%	0.0%	0.0%
Pain	Level 1	73.9%	77.3%	75.7%
	Level 2	22.8%	20.9%	21.8%
	Level 3	3.3%	1.8%	2.5%
Anxiety	Level 1	80.4%	70.9%	75.2%
	Level 2	18.5%	26.4%	22.8%
	Level 3	1.1%	2.7%	2.0%

Level 1=No problems, Level 2=some problems, Level 3=Extreme problems

Table 6-7 Health status of people from Rawalpindi and Islamabad

The above table has revealed that there no much difference in health states of people in Rawalpindi and Islamabad. Now I will discuss the result of each dimension of EQ-5D.

Mobility

Level 3 has no entries in both cases of Rawalpindi and Islamabad.5.4% of the respondents from Rawalpindi claimed to have some issues in walking. While 2.7% of the people from Islamabad reported some problems in mobility. The percentage of people of Rawalpindi who reported no problem in walking is 94.6.In Islamabad the percentage is 96.0.

Self Care

100% of the respondents of Rawalpindi claimed to have no problems in taking self care. While in Islamabad 2.7 % people reported some issues with self care. Level 3 has no entries from both cities.

Activity

There are no entries in level 3 for both cities. Not a significant difference in responses between Rawalpindi and Islamabad.99.1 % of the people of Islamabad claimed that they have no problem in mobility and in Rawalpindi the percentage is almost the same which is 97.8.Only 0.1 % respondents from Islamabad reported some problem in mobility. While in Rawalpindi the percentage is little bit higher 2.2%.

Pain

For dimension pain level 3 has entries.3.3% of the people from Rawalpindi and 1.8% of respondents from Islamabad complained about having extreme pain or discomfort.22.8 % people of Rawalpindi and 20.9% from Islamabad reported to have moderate level of pain or discomfort. The level 1 has most entries which are 73.9% in Rawalpindi and 77.3% in Islamabad.

Anxiety

1.1% of the people of Rawalpindi and 2.7 % respondents from Islamabad claimed to be extremely anxious and depress. The maximum entries are in the category levels 1 which are 80.4% people from Rawalpindi and 70.9% from Islamabad. Moreover, 18.5% respondents from Rawalpindi and 26.4 % from Islamabad reported that to be moderate anxious and depress.

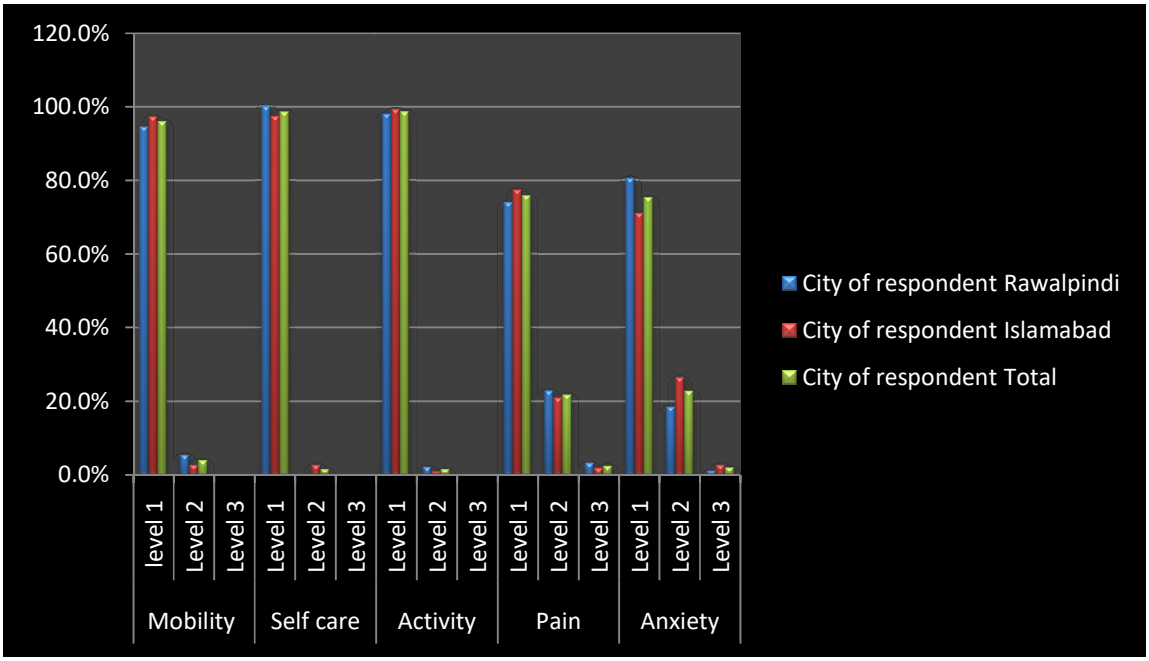
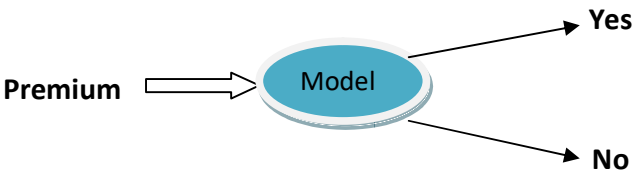


Figure 6-5 Health status of people in Rawalpindi and Islamabad

6.5 Estimation Results

Probit regression will be used to test the hypothesis. Probability regression helps to develop a model of the probability of an event occurrence depending on the values of the categorical and numerical independent variables .It will estimate the probability that an event will occur for a randomly selected observation versus the probability that event does not occur.Moreover,it will be used to predict the effect of variables age,education,income of head of household, health status, unanticipated expenditure, family size on binary response variable which is are you willing to pay x price per member per month to purchase supplementary health insurance?



Premium	lnhhiy	lnage	lnye	lnfs
Rs100 per month	0.1509082	-0.995832***	0.2427638	-0.2478286
Rs 200 per month	0.2378648	-0.9149272***	0.4644628	-0.3684624
Rs300 per month	0.3250281**	-0.7788203**	0.8896634**	-0.5420156**
Rs400 per month	0.3930764**	-0.8737335**	0.6024391	-0.5071032**
Rs500 per month	0.3894128**	-0.8946967***	0.629196	-0.5013401**
Rs600 per month	0.6091539***	-1.082609***	0.2430225	-0.1893718
Rs700 per month	0.6040296***	-1.09404***	0.2295432	-0.2799505
Rs800 per month	0.6134823***	-1.033953**	0.1746033	-0.09907
Rs900 per month	0.5452775***	-1.149962***	0.508473	-0.0883634
Rs1000 per month	0.545278***	-1.14996***	0.508473	-0.08836

*** means 0.00 p value, ** means p value up to 0.05

Table 6-8 Probit regression Results of different levels of premium

Interpretation of coefficient in Probit regression is not easy. The increase in probability by one unit increase in a variable does not remain the same. For instance the increase in age from 49 to 50 years has different effect than one unit increase from 47 to 48 years.

Age

The coefficient of age is negative for all levels of premium. This means increase in age decreases the predicted probability of paying for supplementary health insurance. The level of significance remains the same for all levels of premium.

Income of head of house hold

The coefficient for this variable is not significant for premium Rs 100 and Rs 200.The level of significance increases with increase in level of premium. The level of significance for Rs 300 is 5% and for Rs1000 the level of significance is 1%.The coefficient is positive which means increase in income of head of house hold the predicted probability of paying for supplementary health insurance increases.Rs 100 to Rs 200 is easy to afford and therefore income of head of house has no impact on the predicted probability to pay Rs 100 to Rs 200 for supplementary health insurance. As the amount of premium increase it becomes difficult to afford it. Therefore the affect of income of head of house hold also increases.

Years of education

The value of coefficient is significant for only Rs 300.The sign is positive which means increase in years of education will increase the predicted probability to pay for supplementary health insurance. But on the whole education has no impact on the decision to buy supplementary health insurance. This means the decision to pay for supplementary health insurance is not affected by education.

Family size

The value of coefficient is negative for all levels of premium which means increase in family size will decrease the predicted probability of buying supplementary health insurance. But the value is significant only for premium level Rs 300, Rs 400 and Rs 500.This means that family size does not matter for lower rates of premium but as level of premium increases it does matter but up to certain limit .After that most the people won't be able to afford the package and the group who could afford to pay more than Rs 500 per month per family member does not consider family size in taking the decision to purchase supplementary health insurance. Moreover, rich people mostly have small family size.

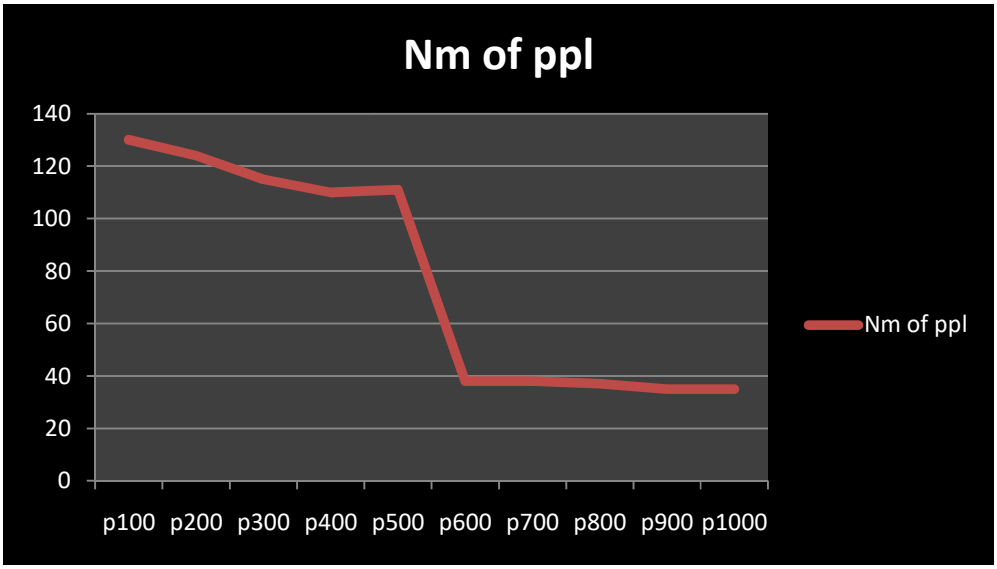


Figure 6-6 Number of willing to pay different amount of premium

The graph shows that 65 % of the total respondents were willing to pay Rupees 100 per month per household member. The number of people who are willing decreases up to Rupees 1000 per month per household member.

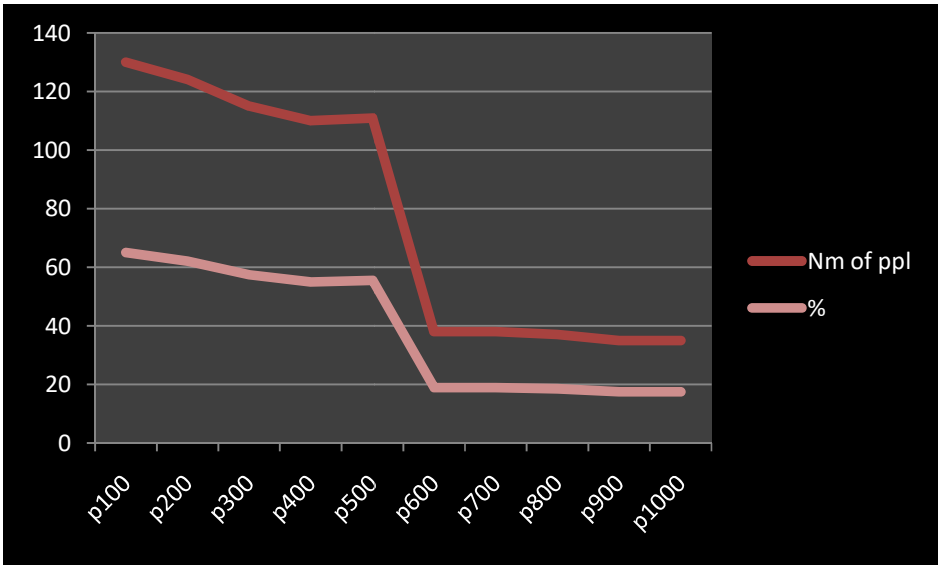


Figure 6-7 Percentage of people willing to pay different amount of premiums

Above graphs revealed that premium of Rs 500 is a kind of threshold level. The willingness to pay for supplementary health insurance changes before and after this point. So I have also calculated the marginal effects at this level of premium.

Premium Rs 500	Coef.	P>z	dy/dx
lnhhiy	0.389413	0.018	0.13876
lnage	-0.8947	0.009	-0.31881
lnye	0.629196	0.16	0.224202
lnfs	-0.50134	0.032	-0.17864
lnvas	-0.20313	0.349	-0.07238
e	-2.66E-07	0.784	-9.49E-08
Rawalpindi =1 city	-0.09707	0.604	-0.03459
_cons	-1.83955	0.423	

Table 6-9 Marginal effects at premium level Rs 500

Above table shows that one unit increase in income of head of house hold increases the probability of willingness to pay Rs 500 for health insurance increases by 0.13876.Similarly, one unit increase in age decrease the probability of paying Rs 500 for supplementary health insurance by 0.31881.Whereas increase in one unit of years of education will increase the probability of willingness to pay Rs 500 for supplementary health insurance by 0.224202.One unit increase in family size decreases the probability of paying Rs 500 for supplementary health insurance by 0.17864.Being from Rawalpindi decreases the probability of paying Rs500 for supplementary health insurance by 0.03459.One unit increase in health status decreases the probability of paying for supplementary health insurance by 0.07238.Furthoremore one unit increase in e (residual from the regression of the log of anticipated expenditure on all other variables which is unanticipated expenditure used in the study) decreases the probability by -9.49E08.

6.7 Interpretation of results

Results have shown that age; years of education, family size, and income of head of household are important factors in determining the decision of purchase supplementary health insurance.

In light of above results we accept the null hypothesis 1 which is there is no significant relation between place of residence and willing to pay for supplementary health insurance. This is because people of Rawalpindi and Islamabad have almost same life style and being twin cities there is not much difference in behavior of people. The value of coefficient for predicted probability to pay for supplementary health insurance is significant for all levels of premium offered except for Rs 100 and Rs 200.The level of significance increase with increase in level of premium. Moreover the value of coefficient is positive which means the income of head of house hold and willingness to pay for supplementary health insurance are positively correlated. So we reject the Null hypothesis 2 which is there is no significant relation between income of head of house hold and willingness to pay for supplementary health insurance. The value of coefficient for family size is negative and is significant for levels of premium Rs 3oo to Rs 500.This means the increase in family size affects the willingness to pay for supplementary health insurance but up to certain limit of premium. After that level of premium either gets too high to afford or people don't want to pay that amount for supplementary health insurance. Therefore we reject the null hypothesis 3 which is there is no significant relation between family size and willingness to pay for supplementary health insurance. The value of probit coefficient for years of education is negative and significant for all levels of premium. This means increase in age will decrease the predicted probability to pay for supplementary health insurance. This can be explained with the traditional approach of people and their reluctance to accept and health insurance. So we reject null hypothesis 4 which is there is no significant relation between age and willingness to pay for supplementary health insurance. The value of Probit coefficient for health status is insignificant. So we accept the null hypothesis 5 which is there is no significant relation between health status and willingness to pay for supplementary health insurance. This is because there is very low percentage of sick people in the data. Fairly

large number of respondents was willing to purchase supplementary health insurance which proves that people are not satisfied with the current set up. Moreover, health status, unanticipated expenditure, city turned out to be insignificant in determining willingness to pay supplementary health insurance.

CHAPTER 7: CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusion and policy recommendations

In the current scenario of health care system in Pakistan where there are many issues such as double burden of diseases, huge out of pocket payments, access issues of health services to poor people my study will researchers and policy makers in taking the decision to expand health insurance system.

This study provides information about health insurance industry of Pakistan and also gives insights about the willingness of people to buy supplementary health insurance. Inspite of being enrolled in employer based health insurance programs results have shown 65% of the people were willing to purchase supplementary health insurance.

Researcher ran separate regression for each bid. The regression results have revealed that age of the respondent has positive and significant relation with the willingness to pay 100 rupees per month per member of the family for health insurance. While years of education, health status, city, unanticipated expenditure, family size and income of head of house hold turned out to be insignificant. Rawalpindi and Islamabad are nearly the same cities. People have same lifestyle and this is why the p value for this variable is very high. The data was collected from private and government organizations. Most of the people interviewed were healthy. So health status had no impact on the willingness to buy supplementary health insurance. Rupees 100 is fairly small amount and is not very hard to afford it. That is why income of head of household, years of education and family size didn't put any impact on the decision to pay 100 rupees per member per month. Among poor people only old people were willing to pay 100 rupees for health insurance. This can be explained by health issues that increase with age and also because awareness also increases with age.

In case of premium Rs 200 per month for each household member regression results have revealed that age of the respondent has positive and significant relation with the willingness to purchase health insurance. While years of education, health status, city, anticipated expenditure, family size and income of head of house hold turned out to be insignificant. The results are nearly the same as for 100 rupees per month per household member.

The regression results for premium Rs 300 per month for each family member have revealed that age and income of head of household, years of education, and family size of the respondent have positive and significant relation with the willingness to pay 300 rupees per month for each family member for health insurance. While city, anticipated expenditure and health status remained insignificant.Unanticapted expenditure of health is insignificant because people have no awareness about how much money they spend on health and how much money they should spend on it. People of Rawalpindi and Islamabad are nearly same. That is why there is no clear difference of opinions among them. People are not risk averse and mostly people considered themselves healthy. They ignore minute problems and seek health care when it gets worst.

The regression results for premium Rs 400 per month for each family member have revealed that age and income of head of household and family size of the respondent have positive and significant relation with the willingness to purchase health insurance. While years of education, health status, city and unanticipated expenditure turned out to be insignificant. Rupees 400 per month per family is little expensive for people with large family size. Therefore Inspite of being educated it is not affordable for many people.

The results of regression for premium Rs 500 per month for each family member indicated no significant difference between respondents of Rawalpindi and Islamabad in willingness to purchase health insurance. Furthermore, number of years of education also did not put any effect on the decision to purchase health insurance. The measure of unanticipated expenditure used in the model is the residual from a regression of the log of anticipations on all other measures in the model which also remained insignificant. Economic status that is the income of

head of household revealed a significant association with the willingness to obtain health insurance. Family size turned out to be important factor. People with large family size were less likely to purchase health insurance. In addition age of the respondent is also significant.

The results of regression for premium Rs 600 per month for each family member indicated no significant difference between respondents of Rawalpindi and Islamabad in willingness to purchase health insurance. Furthermore, number of years of education also did not put any effect on the decision to purchase health insurance. The measure of unanticipated expenditure used in the model is the residual from a regression of the log of anticipations on all other measures in the model which also remained insignificant. Economic status that is the income of head of household revealed a significant association with the willingness to obtain health insurance. Family size turned out to be important factor. People with large family size were less likely to purchase health insurance. In addition age of the respondent is also significant.

The results of regression for premium Rs 700 per month for each family member indicated no significant difference between respondents of Rawalpindi and Islamabad in willingness to purchase supplementary health insurance. Furthermore, number of years of education also did not put any effect on the decision to purchase health insurance. The measure of unanticipated expenditure used in the model is the residual from a regression of the log of anticipations on all other measures in the model which also remained insignificant. Economic status that is the income of head of household revealed a significant association with the willingness to obtain health insurance. Family size turned out to be important factor. People with large family size were less likely to purchase health insurance. In addition age of the respondent is also significant.

The results of regression for premium Rs 800 per month for each family member indicated no significant difference between respondents of Rawalpindi and Islamabad in willingness to purchase health insurance. Furthermore, number of years of education also did not put any effect on the decision to purchase health insurance. The measure of unanticipated expenditure used in the model is the residual from a regression of the log of anticipations on all other measures in the model which also remained insignificant. Economic status that is the income of

head of household revealed a significant association with the willingness to obtain health insurance. Family size turned out to be important factor. People with large family size were less likely to purchase health insurance. In addition age of the respondent is also significant.

The results of regression for premium Rs 900 per month for each family member indicated no significant difference between respondents of Rawalpindi and Islamabad in willingness to purchase health insurance. Furthermore, number of years of education also did not put any effect on the decision to purchase health insurance. The measure of unanticipated expenditure used in the model is the residual from a regression of the log of anticipations on all other measures in the model which also remained insignificant. Economic status that is the income of head of household revealed a significant association with the willingness to obtain health insurance. Family size turned out to be important factor. People with large family size were less likely to purchase health insurance. In addition age of the respondent is also significant.

The results of regression for premium Rs 1000 per month for each family member indicated no significant difference between respondents of Rawalpindi and Islamabad in willingness to purchase health insurance. Furthermore, number of years of education also did not put any effect on the decision to purchase health insurance. The measure of unanticipated expenditure used in the model is the residual from a regression of the log of anticipations on all other measures in the model which also remained insignificant. Economic status that is the income of head of household revealed a significant association with the willingness to obtain health insurance. Family size turned out to be important factor. People with large family size were less likely to purchase health insurance. In addition age of the respondent is also significant.

Overall income of head of household, years of education, family size, and age turned out to be significant factors in determining this decision. These results are similar to the literature reviewed in this context. While city, health status, anticipated expenditure had no impact on the probability of people saying yes to pay for supplementary health insurance unlike the studies done in other countries.

Yet the findings of this study highlight the issues in currently operational health insurance systems in Pakistan. It describes in detail the whole set up.

Moreover the findings have revealed that people are willing to buy supplementary health insurance. So a national health insurance program can be launched. The major challenges for health insurance industry are lack of knowledge, negligence of insurance companies and religious concerns. People should be educated about views of Islam about health insurance.

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Annex-A

Willingness to buy supplementary health insurance under employer based health insurance system in Pakistan: A case study of Rawalpindi and Islamabad

SECTION A: Socio-demographic/Socio-economic Section

1. What is your status in this household? [ ] 0 = female head of household; 1 = male head of household; 2 = wife; 3 = grandmother; 4 = representative of household

2. Are you the main income earner in your household? [ ] 1 = yes 0 = no

3. Family size? [ ]

4. How old are you? [ ]

5. *Respondent's Sex?* [ ] 1 = male 0 = female

6. City of residence _____ Rawalpindi=1, Islamabad=0

7. Did you go to school? [ ] 1 = yes 0 = no

8. What was your highest completed education level?

_____

9. What was the total number of years that you spent schooling? [ ]

10. What occupation is your major source of income? 1 = yes 0 = no

a. Unemployed [ ]

b. Petty trading [ ]

c. Government Worker [ ]

d. Employed in private sector [ ]

e. Big business [ ]

f. Self-employed professional [ ]

g.Others [ ] please, specify: _____

11. What occupation is the household's major source of getting money? [ ]
[Enumerator: Note that it may or may not be respondent's occupation]

12. What is the monthly income of head of house hold? [ ]

13. What is the total income of family? [ ]

14. Do you have any existing medical condition? Yes=1, No=0

If yes than go to question no 15

15. What is the name of medical condition you have?

_____

Section B: PAYMENT MECHANISM

Q 1. Are you currently covered by any type of private or public health Insurance? Yes ……..1, No…….2

_____

Q 2. What kind of health insurance are you covered by?

Employer based health insurance/group insurance/Employer provides health facilities……..1

Public health insurance……..2

Private health insurance……3

Q 3.What is your relationship to the policyholder(s) of this plan?

(A policyholder is the person in whose name the insurance is carried.)

CIRCLE ONE

SELF..... 1

SPOUSE..... 2

PARENT..... 3

OTHER RELATIVE..... 4

FRIEND..... 5

OTHER..... 6

Q 4. Are you covered by more than one health insurance plan that pays for any part of your hospital or doctor bills? YES=1, No=0

……

Q 5. Do you have health insurance that covers prescription medications? Yes=1, N0=0

Q 6. Does your employer or union pay all, most, some, or none of the cost of your insurance premiums?

Yes=1, No=0, some amount=2

_____

Q 7.What is the amount of premium you pay for health insurance?

Rs _____

Q 8.How often do you have to pay premium or amount is deducted from your salary? Monthly=0, annually=1, other=2

_____

Q 9. Do you have to pay deductible (The amount you have to pay out-of-pocket for expenses before the insurance company will cover the remaining costs.)Or any copayment (A fixed amount (for example, $15) you pay for a covered health care service, usually when you get the service. The amount can vary by the type of covered health care service) before utilization of services? Yes=1 No=0 If yes than go to question 10 and 11.

_____

Q 10.The amount of deductible is _____

Q 11.The amount of copayment is_____

UPPER LIMIT

Q 12.What is the Annual Upper limit (if any) for hospital stay?

_____

Q 13.What is the Annual Upper limit (if any) on Diagnostic Tests?

_____

Q 14.What is the Annual Upper limit (if any) for major surgery?

_____

Q 15.What is the Annual upper limit (if any) on maternity benefits?

_____

Q 16.ANTICIPATED EXPENDITURE QUESTION

Of course nobody knows what will happen next, but we would like your best guess on how much your family health care cost during next 12 months, Include doctors, dentists, clinics, medical tests, X-rays, prescription drugs, the total of all expenses for your family during the next 12 months. Include both what you are likely to pay and also what will be paid by insurance?

_____

Section C WILLINGNESS TO PAY FOR HEALTH INSURANCE

Suppose you are enrolled in an insurance scheme and you had the same upper limit on your medical expenditure which is x for the family.

Q 1.How much amount of premium would you be willing to pay for 50 % increase in Annual Upper limits?

_____

Q 2. How much amount of premium would you be willing to pay for 40 % increase in Annual upper limits?

_____

Q 3. How much amount of premium would you be willing to pay for 30 % increase in Annual Upper limits?

_____

Q 4. How much amount of premium you would be willing to pay for 20 % increase in Annual Upper limits?

_____

Q 5. The price of a monthly insurance premium is Rs 500; are you willing to pay this amount of money per household member? [ ] 1 = Yes No=0 if No than go to question 12

Q 6. What is the maximum amount you are willing to pay per household member per month? [ ]

Q 7. What if the monthly health insurance premium per household member is Rs 600, will you be willing to pay? [ ] 1 = yes 0 = No

Q 8. What if the monthly health insurance premium per household member is Rs 700, will you be willing to pay? [ ] 1 = yes 0 = No

Q 9. What if the monthly health insurance premium per household member is Rs 800, will you be willing to pay? [ ] 1 = yes 0 = No

Q 10. What if the monthly health insurance premium per household member is Rs 900, will you be willing to pay? [ ] 1 = yes 0 = No

Q 11. What if the monthly health insurance premium per household member is Rs 1000, will you be willing to pay? [ ] 1 = yes 0 = No

Q 12. What if the monthly health insurance premium per household member is Rs 400, will you be willing to pay? [ ] 1 = yes 0 = No

Q 13. What if the monthly health insurance premium per household member is Rs 300, will you be willing to pay? [ ] 1 = yes 0 = No

Q 14. What if the monthly health insurance premium per household member is Rs 200, will you be willing to pay? [ ] 1 = yes 0 = No

Q 15. What if the monthly health insurance premium per household member is Rs 100, will you be willing to pay? [ ] 1 = yes 0 = No

Q 16. What really is the maximum amount you are willing to pay for the monthly health insurance premium?

[ ]

Section D Health Status

By placing a tick in one box in each group below, please indicate which statements best describe your own health state today.

Mobility

I have no problems in walking about

I have some problems in walking about

I am confined to bed

Self-Care

I have no problems with self-care

I have some problems washing or dressing myself

I am unable to wash or dress myself

Usual Activities (*e.g. work, study, housework, family or leisure activities)*

I have no problems with performing my usual activities

I have some problems with performing my usual activities

I am unable to perform my usual activities

Pain/Discomfort

I have no pain or discomfort

I have moderate pain or discomfort

I have extreme pain or discomfort

Anxiety/Depression

I am not anxious or depressed

I am moderately anxious or depressed

I am extremely anxious or depressed

Visual Analogue Scale

Please indicate on this scale how good or bad your own health state is today.

The best health state you can imagine is marked 100 and the worst health state you can imagine is marked 0.

Please draw a line from the box to the point on the scale that indicates how good or bad your health state is today.