CHAPTER X
SUMMARY, CONCLUSION AND POLICY IMPLICATIONS

Human resource is the real wealth of a nation (Yojana, 2014). Economic development coupled with human resource development should be the primary goal of a nation (WHO, 2001; Wagstaff, 2002; Jutting, 2003; Mahal & Duraisamy, 2005; Economic Survey, 2013; Prinja, 2014; Ray, 2014). Despite, high economic growth India ranks 130th in the human development index, a composite measure of three dimensions of human development: living a long and healthy life, being educated and having a decent standard of living (Economic Survey, 2016). This is quite low compared to other developed and developing countries. Since independence, India struggled to provide its people with universal health coverage (Nagpal, 2014). Whether, defined in terms of financial protection or access to health care, the majority of Indians remain irregularly and incompletely covered from the healthcare (Forgia & Nagpal, 2012). Although India’s healthcare system improved gradually over the last few decades, still it continues to lag behind those of the neighboring countries. The poor state of healthcare in India may be attributed to lack of public funding for healthcare, as estimates revealed that the per capita spending on healthcare by the Indian government is far below the international recommendations (Mudgal et al., 2005). On one hand, the country is gripped with communicable and non-communicable diseases resulting out of changing lifestyle, while on the other hand health care costs are escalating making the access to quality health care difficult (Ghaffar et al., 2004; Islam & Biswas, 2014). The government spending on health has declined and health insurance emerged as an alternative tool to finance healthcare (Pathak, 2011). Generally, health insurance is used to describe a form of insurance which pays for the medical expenses (Kuruvilla et al., 2007). It is sometimes used more broadly to include insurance covering disability or long-term nursing or custodial care needs (Rajan & Dhunna, 2002). The IRDA Regulations (2000) defined “Health insurance business or health cover as effecting of contracts which provide sickness benefits or medical, surgical or hospital expense benefits, whether in-patient or out-patient, on an indemnity, reimbursement, service, pre-paid, hospital or other plans basis, including assured benefits and long-term care” (Majumdar, 2004).
There are five main stakeholders in the health insurance and these stakeholders are insurance companies, healthcare providers, customers, third party administrators (TPAs) and regulators. The health insurance business involves more stakeholders than of any other form of insurance which makes the whole process complex and difficult to regulate (Bhat & Jain, 2006). There are basically two forms of health insurance in India namely mandatory health insurance and voluntary health insurance (Devadasan & Nandraj, 2006). The mandatory health insurance covers certain population groups, whether they contribute to the scheme or not. India trysts the mandatory health insurance schemes with the Employees State Insurance Scheme (ESIS) and Central Government Health Scheme (CGHS), both are contributory and mandatory (Mavalankar & Bhat, 2000). The private health insurance was characterized as voluntary, for-profit commercial coverage (WHO, 2004). In private health insurance, buyers are willing to pay the premium to the insurance company which pools similar risks and insure them from the health-related expenses (Anita, 2007). The premium is set on the assessment of risk status of the consumer and the level of benefits provided (Forgia & Nagpal, 2012). There are community-based health insurance schemes, typically targeted at poorer population living in communities (PHFI, 2011). Such schemes are generally run by charitable trusts or non-governmental organizations (Purohit, 2014). The government has introduced a set of health insurance schemes usually for the poorest and vulnerable section of the community (Srinivasan, 2011). The employers in both the public and private sector offer employer-based insurance schemes. These facilities are by way of lump sum payments, reimbursement of employee’s health expenditure for outpatient care and hospitalization, fixed medical allowance or covering them under the group health insurance schemes (Anita, 2007).

10.1 Rationale of the Study

Two-fifth of the GDP in India originates from the informal sector and 90 percent of families earn their livelihood from the informal sector (Gumber, 2000; Mahal, 2014). The workers employed in the informal sector work for long hours but have small and irregular income (Jhabvala & Subrahmany, 2000; Jain, 2012). The poor working environment, inadequate safety and environmental hazards are particularly evident in the informal sector (Chattopadhyay, 2005; Jain, 2012). Due to which the workers employed
in the informal sector are prone to many communicable and chronic diseases (Gumber & Kulkarni 2000; Acho, 2002; Chattopadhyay, 2005; Silva & Kriebel, 2006). The health is the only productive asset for them and any disease is likely to hit them the hardest (Mexican Commission on Macroeconomics and Health, 2004; Prinja, 2014). The informal sector workers do not get any work-related benefits or protection under the labour laws (Jain, 2012). They neither have permanent employer-employee relation nor do they obtain any health care benefits, paid leave for illness, maternity benefits, insurance, old age pension and other benefits (Ahmad et al., 1991; Gumber & Kulkarni, 2000). The most of the workers employed in the informal sector have not formed their union or associations (Bremen, 2001). One of the major insecurities of these workers and their families is the frequent incidents of illness, the need for medical care and hospitalization (Gumber, 2000; Ghosh, 2010). But, the medical cost has increased and cost of treatment has reached prohibitive levels (Kamatb & Radkar, 2007; Sinha, 2012). The disappearance of free health care has resulted in the loss of social protection for a large portion of the population especially working in the informal sector (Chattopadhyay, 2005; Donfouet & Mahieu, 2012). The heaviest burden of out of pocket healthcare expenditure is borne by the people employed in non-formal activities (Randall et al., 2000). It was estimated that a single hospitalization event can account for a loss of 20 to 60 percent of the annual per capita income (Sunder & Sharma, 2002). This leads to a tremendous burden on poor household and indebtedness, sometimes resulting in liquidation of their assets (Gumber, 1997; Sunder & Sharma, 2002). The health risks and resulting catastrophic financial losses are probably the significant threats to their income and consumption (Bhat & Jain, 2006; Choudhary, 2014).

Besides the various efforts made by the government and non-government organizations to provide health insurance to the informal sector, the subscription is very low in the informal sector of India. Therefore, need is to do a systematic analysis and empirical testing of willingness to pay for health insurance of the informal sector. Thus, the main aim of the present study is to examine the “Health Insurance for the Urban Informal Sector in Punjab”. Specifically, the objectives of the present study were:
1. To examine the development, growth pattern and trends of health insurance in India;
2. To examine the health insecurities involved in the urban informal sector;
3. To analyze the awareness of health insurance among urban informal sector;
4. To estimate the demand and capacity to pay for health insurance among urban informal sector;
5. To study the problems of health insurance in the urban informal sector; and
6. To suggest policy measures for providing health insurance to the urban informal sector.

10.2 Data Base and Methodology

The present study was based on both the primary and secondary data. The primary data was obtained from the three urban districts of Punjab-Amritsar, Jalandhar and Ludhiana. It was planned to give a true representation of the three cultural belts of Punjab viz., Majha, Doaba and Malwa. Thus, Amritsar from Majha, Jalandhar from Doaba and Ludhiana from Malwa were selected for the study as these districts have the highest proportion of urban population in their respective belts (Business Standard, 2011; Planning Commission, 2013; Statistical Abstract Punjab, 2015). Three groups of the informal sector workers: construction workers, vendors (Rehri-wala) and non-registered shopkeepers were selected as these occupational groups are commonly found in all of the urban districts of Punjab. From each of the district, seven clusters of the construction workers, vendors and non-registered shopkeepers were identified and from each cluster 10 respondents were selected randomly and a total of 630 respondents constitute the sample for the present study. The cluster of the vendors and shopkeepers were identified done on the basis of the list obtained from the municipal corporation offices of the respective districts. Only those clusters were identified which have the highest concentration of the vendors and non-registered shopkeepers. While, clusters of the construction workers were decided on the basis of discussion with the experts. In order to give better insights of the informal sector, those respondents were selected who had worked in informal sector from the past five years. The cluster of the vendors from Amritsar includes Bus Stand, Putlighar Chowk, Mall Mandi, Majitha Road, Ram Bagh,
Shaheedan Road, Hakima Gate and Railway Station. The cluster of construction workers from Amritsar were Ratan Singh Chowk, Hall Bazar, Sultan Wind Gate, Bakar Mandi, Vijay Nagar, Putlighar Chowk and Majitha Road. The cluster of shopkeepers from Amritsar included Hakima Gate, Majitha road, Batala road, Sultan Wind Road, Ram Tirath Road, Tehsil Pura and Chheharta. The cluster of vendors from included Jalandhar Bus Stand, Jyoti Chowk, B.N.C Chowk, Kapurthala Chowk, P.N.B Chowk, Railway Station and Ambedker Chowk. The cluster of construction workers in Jalandhar constituted Rama Mandi, Ladowali Road, Jyoti Chowk, Ravidass Chowk, Patel Chowk, Football Chowk, Doaba Chowk, Nakodar Chowk and Dana Mandi. The cluster of shopkeepers in Jalandhar contained Masand Chowk, Basti Guzan Chowk, Mai Hira Gate, Sodal Mandir Chowk, Preet Nagar, Basti Bawa Khel Road and Lama Pind Chowk. The cluster of vendors from Ludhiana was Pakhowal Road, Railway Station, Gill Road, Janak Puri, Durgi Road, Chaura Bazar, Basti Jodhewal. The cluster of construction workers from Ludhiana was Clock Tower, Pakhowal Road, Old Sabzi Mandi, Partap Chowk, Focal Point, Gill Road and Samrala Chowk. The clusters of shopkeepers from Ludhiana were Basti Jodhewal, Lajpat Rai Road, Karimpura Chowk, Udam Singh Nagar, Agar Nagar, Balmiki Nagar and Pakhowal Road. Thereafter, from each cluster, ten respondents were selected randomly. A structured questionnaire was prepared to collect the data from the respondents. The secondary data was obtained from the various annual reports of IRDAI, Handbook on Indian Insurance Statistics (2011-12) published by IRDAI, various reports of Insurance Information Bureau (IIB) of India, annual reports and public disclosures of the public and private general insurance companies.

The analysis of the data was made with the help of Data Envelopment Analysis (DEA), Probit regression, factor analysis, annual growth rate, compound annual growth rate (CAGR), headcount (H), mean gap (G), mean positive gap (MPG), weighted average score (WAS), mean, median, percentage and graphs. The growth pattern of the health insurance business in India was examined with the help of annual growth rate and compound annual growth rate (CAGR). DEA was used to examine the comparative efficiency of the health insurance business of the public and private general insurance companies from 2006-07 to 2013-14. The base year for DEA was 2006-07, as in this year the first standalone health insurance company started its operation in Indian insurance.
market and the maximum number of private general companies started the health insurance business. The commission paid was taken as an input and the net premium paid was the output. DEA was performed on four public general insurance companies i.e. New India Assurance Company Limited, Oriental Insurance Company Limited, National Insurance Company Limited, United India Insurance Company Limited and nine private general insurance companies such as Royal Sundram Alliance Insurance Company Limited, Tata AIG General Insurance Company Limited, Reliance General Insurance Company Limited, IFFCO Tokio General Insurance Company Limited, ICICI Lombard General Insurance Company Limited, Bajaj Allianz General Insurance Company Limited, HDFC ERGO General Insurance Company Limited of which two are standalone health insurance companies (deals exclusively in the health insurance business) i.e. Star Health and Allied Insurance Company Limited and Apollo Munich Health Insurance Company Limited. The Malmquist index was applied to examine the Efficiency Change (EC), Technological Change (TC), Pure Technical Efficiency Change (PTEC), Scale Efficiency Change (SEC) and Total Factor Productivity Change (TFPC) of health insurance business of general insurance companies.

The health insecurities of informal sector workers were examined at levels: outpatient care, inpatient care and chronic disease. The health insecurities were estimated on the basis of the type of illness, severity of the illness, utilization of health facility, self-treatment, access to health facility, direct and indirect cost of illness and the copying mechanism. The analysis of the health insecurities was done on the basis of the weighted average score (WAS), mean, median and percentage. The incidence and intensity of healthcare expenditure were measured with the help of headcount (H), the mean gap (G) and mean positive gap (MPG). The analysis of awareness of health insurance was made with the help of percentage and Probit regression. The explained variable was defined as aware of health insurance=1 and 0 otherwise. The explanatory variable includes a set of demographic variables, regional variables, economic variables, healthcare variables and insurance variables. The demand and capacity to pay was examined with the help of mean, median, percentage and Probit regression. The explained variable was defined as willing to pay for health insurance =1 and 0 otherwise. The explanatory variables included a set of demographic variables, regional variables, economic variables,
healthcare variables and insurance variables. Thereafter, to examine the why the workers employed in the informal sector were reluctant to pay for the health insurance the factor analysis was applied.

10.3 Development, Growth Pattern and Trends of Health Insurance

Although health insurance is of recent origin in India, yet it has achieved many milestones. The first statutory measure in insurance sector of India was introduced in 1912 with the pass of the Indian Insurance Act, 1912. Thereafter, workman compensation act was passed in 1923 to provide workmen and their dependents compensation due to accidents which occur in the course of employment, causing death or permanent disablement. The insurance act was passed in 1938 and insurance sector was divided into two branches namely life and non-life insurance. But, the formal beginning of health in India was associated with the introduction of Employee State Insurance Scheme Act (1948) and soon it was followed by Central Government Health Scheme (1954). Thereafter, Tariff Advisory Committee (1968), Nationalization of General Insurance Industry (1972), Mediclaim policy (1986), Malhotra Committee (1994), IRDA act (1999) were the major developments before the privatization of insurance sector in India.

The growth of health insurance sector was measured from 2001 to 2013. It was examined that penetration of non-life insurance sector is steady, but an upward trend was found in the density of non-life insurance which was USD 2.4 in 2001 and increased to USD 11.0 in 2013. The density of life insurance was USD 9.1 in 2001 and reached to USD 41 in 2013 while the penetration of life insurance business increased from 2.15 percent in 2001 to 3.10 percent in 2013. Despite the several initiatives taken by the IRDA the penetration and density of insurance is quite insignificant. The segment-wise analysis of non-life insurance revealed that compound annual growth rate (CAGR) was 27.06 percent, 18.29 percent, 7.98 percent, 3.77 percent and (-) 6.12 percent of the health insurance, motor insurance, fire insurance, marine insurance and others respectively. It was found that the number of health insurance policies were 22,65,451 in 2003-04 and increased to 94,10,044 in 2012-13 but the number of members and number of claims was 83,61,629 and 3,60,088 respectively in 2003-04 which increased to 34746716 and 3517759 respectively in 2012-13. The total premium earned and claim paid of health insurance was ₹944 crore and ₹785 crore respectively in 2003-04 with a claim paid ratio of 83 percent. The total premium and claim paid increased to ₹12,941 crore and ₹8,783 crore respectively in 2012-13 and reflected a claim paid ratio of 68.0 percent. The compound annual growth rate (CAGR) was 18.93 percent, 20.34 percent and 28.74 percent, 37.42 percent and 35.49 percent of the number of policies, number of members, number of claims, total premium and claim paid respectively. The compound annual growth rate of the premium per policy, premium per insured member, number of persons insured per policy, claim paid per policy and claim paid per insured member were 15.69 percent, 14.32 percent, 1.86 percent, 13.94 percent and 12.75 percent respectively. The information on growth rates of different variables of health insurance business will be helpful to the public and private general insurers on the aspects such as policy pricing, claim management, premium setting, and investment etc.

Data Envelopment Analysis was applied to find out the efficiency of health insurance business of public and private general insurers from 2006-07 to 2013-14. The company-wise efficiency analysis of public general insurance companies had shown the mixed trends. It was analyzed that all public general insurance achieved the frontier one year or the other during the study period. Oriental Insurance Company Limited and
United Insurance Company Limited revealed decreasing returns to scale from 2012-13 onwards. The analysis of the private general insurance companies revealed that Tata AIG General Insurance Company and Reliance General Insurance Company Limited were the most efficient companies as these companies had never experienced decreasing returns to scale from 2006-07 to 2013-14 followed by standalone health insurer, Star Health and Allied Insurance Company Limited which either shown increasing returns or constant returns except 2010-11. Bajaj Allianz General Insurance Company Limited was the least efficient private company as it experienced decreasing returns for the six consecutive years from 2008-09 to 2013-14. While, HDFC ERGO General Insurance Company Limited, ICICI Lombard General Insurance Company Limited and Apollo Munich Health Insurance Company Limited consecutively shown decreasing returns to scale from the last five years, four years and two years respectively. On the other hand, year-wise analysis revealed that 2006-07 and 2007-08 were the most efficient years as during these years all the public and private general insurance companies had shown either increasing returns to scale or constant returns to scale. But, 2013-14 was not a good time for health insurance in India as all of the public and most of the private general insurance companies had shown decreasing returns to scale.

The mean of technical efficiency of the public and private general insurance companies was 0.416 and 0.237 respectively in 2006-07 and increased to 0.822 and 0.524 respectively in 2013-14. This clearly reflects that mean of technical analysis of public general insurers was more than of private general insurers. While mean of pure technical analysis of public and private general insurance companies were 0.810 and 0.643 respectively in 2006-07 and increased to 0.915 and 0.902 respectively in 2013-14. This reflects that the improvement of the mean of pure technical was higher among the private general insurers than of the public insurers. Mean of scale efficiency of private and public insurers were 0.487 and 0.366 respectively in 2006-07 and increased to 0.906 and 0.611 respectively in 2013-14. This could be due to the fact that public general insurance companies have fully achieved the benefits of technical efficiency and scale efficiency as compared to private general insurance companies.

The improvement space was 62.2 percent, 24.8 percent, 55.8 percent and 90.9 percent for New India Assurance Company Limited, Oriental India Insurance Company
Limited, National Insurance Company Limited and United India Insurance Company Limited respectively in 2006-07 and it decreased to 17.9 percent, 17.2 percent, 1.1 percent and 34.7 percent for New India Assurance Company Limited, Oriental India Insurance Company Limited, National Insurance Company Limited and United India Insurance Company Limited respectively in 2013-14. The improvement space and improvement direction of health insurance business of the public general insurance companies had decreased which signifies that distance of public general insurance from the frontier became narrower and accordingly, public general insurance companies moved towards the frontier. An analysis of the private general insurance companies had shown that improvement space for the Tata AIG General Insurance Company Limited and Reliance General Insurance Company Limited was 70.3 percent and 99.6 percent respectively in 2006-07 which reduced to 0 percent in 2013-14. It was observed that two private general insurance companies are fully efficient companies. However, the improvement space was 46.8 percent, 99.6 percent, 95.2 percent, 22.6 percent, 82.4 percent, 99.1 percent, 92.1 percent for Royal Sundram Alliance Insurance Company Limited, IFCCO-Tokio, ICICI Lombard Limited, Bajaj Allianz General Insurance Company Limited, HDFC ERGO General Insurance Company Limited, Star Health and Allied Insurance Company Limited and Apollo Munich Health Insurance Company Limited respectively for 2006-07 and it decreased to 8.7 percent, 98.0 percent, 94.4 percent, 44.0 percent, 73.2 percent, 89.4 percent and 20.4 percent respectively in 2013-14.

A downfall in total factor productivity change (TFPC) of health insurance business of public general insurance companies was reported from 2006-07 to 2013-14. The total factor productivity change of New India Insurance Company Limited, National Insurance Company Limited, United India Insurance Company Limited and Oriental Insurance Company Limited was 1.742, 1.171, 1.501 and 1.393 respectively from 2006-07 to 2007-08 and reduced to 0.239, 0.156, 0.496 and 0.759 respectively from 2012-13 to 2013-14. It was found that two private general insurance companies Royal Sundram Alliance Insurance Company Limited and HDFC ERGO General Insurance Company Limited had shown a decrease in their productivity from 2006-07 to 2013-14 whereas, other private general insurance companies had shown a tremendous increase in their productivity from 2006-07 to 2013-14.
10.4 Characteristics of the Study Units

An attempt was made to understand the characteristics of the study units on the basis of gender, marital status, age, religion, caste, type of family, level of education, occupation, household income, possession of agricultural land, family size, head of the family, decision making authority, household asset, type of fuel used for cooking, type of house, ownership of house, number of rooms in house, type of bathroom, type of toilet, availability of drinking water, sources of drinking water, BPL card, saving account, type of account, consumption expenditure and accessibility to the nearest healthcare facility. It was observed that majority of the respondents were male and mean and the median age of the respondents were 38.08 years and 44.0 years respectively. Eighty percent of the respondents were married and 16.0 percent were single. The religion-wise distribution revealed that most of the respondents were Hindu followed by Sikh, Muslim and Christian. The education-wise analysis had shown that 29.0 percent of the respondents were without any formal education and 36.2 percent were above primary but up-to secondary. However, 38.4 percent of the respondents were working in their present occupation from 6-10 years. Most of the respondents lived in their own pucca houses and had the availability of bathroom, toilet and dirking water in their houses. It was observed from the above analysis that most of the household decisions were male dominated and only 12.0 percent of the families followed joint decision making. However, twenty-six percent of the household enrolled with BPL cards and 76.2 percent had their saving accounts. The mean and median annual household income of the respondents was ₹93,491.10 and ₹74,999.00 respectively. The analysis of the household consumption expenditure revealed that a major chuck of the household income was spent on food (62.33 percent) followed by utilities (11.63 percent), clothing (8.87 percent), education (5.75 percent), health care (4.98 percent), travelling (1.91 percent) and miscellaneous (0.01 percent). The mean and median distance covered to access the nearest health care facility was 3.2 km and 3.00 km respectively.

Occupation-wise analysis of the characteristics of the study units revealed that 99.5 percent of the construction workers, 94.8 percent of the vendors and 81.4 percent of the shopkeepers were male. The mean age of the construction workers, vendors and shopkeepers were 33.52 years, 36.90 years and 43.83 years respectively. However, it was
found that 77.0 percent, 79.0 percent and 86.0 of the construction worker, vendor and shopkeeper respectively were married. The religion-wise distribution of three occupations highlighted that majority of the construction workers were Sikh but the majority of the vendors and shopkeepers were Hindu. The education-wise analysis had shown that 34.3 percent of the construction workers, 21.4 percent of vendors and 12.4 percent of the shopkeepers were illiterate. However, 10.0 percent of construction workers, 6.2 percent of vendors and 1.9 percent of the shopkeepers were without any formal education. The majority of the shopkeepers followed by vendors and construction workers were above senior secondary. However, the majority of the respondents lived in pucca houses (concrete) of which 31.0 percent, 65.0 percent and 87.0 percent were the construction workers, vendors and shopkeepers respectively. It was found that 93.3 percent of the shopkeepers, 58.1 percent of the vendors and 32.9 percent of the construction workers used LPG for cooking. But, the mean household size was 5.36, 5.20 and 5.42 members of the construction workers, vendors and shopkeepers respectively. The majority of the respondents from all occupations had nuclear families. It was found that 62.0 percent of the shopkeepers, 56.0 percent of vendors and 52.0 percent of the construction workers themselves take the decision in the house. Only 43.8 percent of the construction workers, 26.7 percent of vendors and 7.6 percent of the shopkeepers had BPL cards. But, 92.0 percent of shopkeepers, 68.6 percent of construction workers and 67.6 percent of the vendors had saving accounts. The mean annual income of the construction workers, vendors and shopkeepers were ₹75,951.42, ₹82,141.90 and ₹1,22,379.98 respectively. It was examined that respondents from all of the three occupations spend the highest proportion of income on food. The highest spending on utilities, education, clothing and travelling was incurred by shopkeepers. The highest expenditure on healthcare was incurred by the shopkeepers followed by the construction workers and vendors respectively. But, the highest expenditure on recreation (including expenses on alcohol and tobacco) was observed among the construction workers (6.47 percent) followed by vendors (5.05 percent) and shopkeepers (3.08 percent) respectively. The mean distance covered by construction workers, vendors and shopkeepers to access the nearest health facility was 3.45 km, 3.23 km and 2.91 km respectively.
The district-wise comparison revealed that mean age of the respondents were 38.7 years, 40.8 years and 34.7 years in Amritsar, Jalandhar and Ludhiana respectively. However, gender-wise distribution had shown that 90.0 percent, 95.0 percent and 91.0 percent of the respondents were male from Amritsar, Jalandhar and Ludhiana respectively. The comparison of the three districts highlighted that most of the married respondents belonged to Jalandhar (84.0 percent) and about an equal number of respondents were married from Amritsar and Ludhiana. The caste-wise analysis had shown that majority of the Hindu belonged to Ludhiana and Sikh to Amritsar. While 18.6 percent, 7.1 percent and 4.8 percent of the respondents had the ownership of the agriculture land in Ludhiana, Amritsar and Jalandhar respectively. But, it was observed that 28.0 percent, 23.0 percent and 17.0 percent of the respondents were illiterate from Ludhiana, Amritsar and Jalandhar respectively. An analysis of the type of house had shown that 73.0 percent from Jalandhar and 54.0 percent each from Amritsar and Ludhiana lived in the pucca houses. The mean household size was 5.33, 4.93 and 5.74 members in Amritsar, Jalandhar and Ludhiana respectively. The majority of respondents from all the districts themselves were the head of the family. However, 31.0 percent, 28.0 percent and 20.0 percent of the respondents from Amritsar, Jalandhar and Ludhiana respectively had the BPL cards. While, 82.0 percent, 76.0 percent and 72.0 percent from Jalandhar, Ludhiana and Amritsar had saving accounts and majority of them had their saving account with banks. The annual mean household income was ₹83,094.29, ₹1,01,189.50, ₹96,189.51 in Amritsar Jalandhar and Ludhiana respectively. About an equal percent of the income was spent on food, utilities, health, education and traveling across the three districts. However, spending on recreation was the highest in Jalandhar (5.26 percent) followed by Ludhiana (5.21 percent) and Amritsar (3.04 percent) respectively. But, the spending on clothing was the highest among the respondents of Amritsar followed by Ludhiana and Jalandhar respectively. The mean distance covered to access the nearest health facility was 3.42 km, 3.0 km and 3.18 km respectively in Amritsar, Jalandhar and Ludhiana respectively.

10.5 Health Insecurities Involved in Urban Informal Sector

Health security was defined as low exposure to risk, access to health services and ability to pay for medical care and medicine (Unni & Rani, 2002; Saltman, 2008).
Health insecurities adversely affect the ability to work, income and basic human needs (Nandraj et al., 1998; Sunder & Sharma, 2002; Chaudhuri & Roy, 2008). The health insecurities were examined at three levels: outpatient care, inpatient care and chronic disease. It was found that 41.0 percent of the household suffered from illness and the main cause of illness was cold/cough and cold fever followed by headache, wound, malaria, typhoid, stomach related problem, cholera, chicken pox, dehydration, gastric problem/acidity, diarrhea, pneumonia, body ache/backache and blood pressure. The majority of the respondent’s availed outpatient care from the chemist shops followed by government hospitals, RMP/local doctor, private clinic, private hospital, hakim/faith healer and homeopathic for outpatient care. The mean and median distance covered to visit the health care facility for the outpatient care was 2.86 km and 2.0 km respectively and mean and median healthcare expenditure was ₹283.68 and ₹80.0 respectively. To cope up the healthcare expenditure the respondents resorted to various coping strategies such as their own money, borrowing from neighbor, friends, support from relatives and employer. It was observed that 12.4 percent of respondents suffered a wage loss due to outpatient care and mean and median man days loss was 2.9 and 2.0 days respectively. The mean and median money loss due to outpatient care was ₹453.1 and ₹600.0 respectively. Those who have not utilized health facility for the illness stated the reasons as they could not get away due to work, did not have money and minor complaints do not call professional assistance.

It was analyzed that 42.2 percent of the respondents experienced inpatient care and the main cause of inpatient care was the head wound followed by delivery, stone operation, epilepsy, fractured leg/hand and tuberculosis. Most of the respondents had utilized inpatient care from the private hospitals followed by government hospitals, private clinic, RMP/local doctor and charitable hospitals. The mean and median distance covered to visit the health facility for the inpatient care was 4.74 km and 5.0 km respectively. The mean and median healthcare expenditure on inpatient care was ₹21,404 and ₹10,000 respectively. The respondents suffered a mean and median wage loss of ₹3,384 and ₹1,600 respectively. The mean and median wage loss to the accompanying person was ₹793 and ₹600 respectively. The various coping strategies to meet healthcare expenditure on inpatient care includes their own money, borrowing from friends,
borrowing from relatives, mortgage of assets, sold jewelry, belonging and other goods. It was found that 39.4 percent of the respondent suffered from the chronic diseases such as diabetes, high blood pressure and heart disease. Most of the respondents had utilized private hospitals and chemist shops for the treatment of the chronic disease. The monthly mean and median expenditure on the chronic disease was ₹405 and ₹300 respectively. However, mean and median wage loss due to chronic disease was ₹304 and ₹300 respectively. The mean and median wage loss to the accompanying person was ₹315 and ₹250 respectively. The incidence and intensity of catastrophic healthcare expenditure was measured for outpatient care, inpatient care and chronic disease at 5 percent, 10 percent, 20 percent, 30 percent and 40 percent threshold levels. The results of the incidence and intensity had clearly shown that as the catastrophic threshold level increases the incidence and intensity of catastrophic expenditure due to outpatient care, inpatient care and chronic disease declines. The incidence and intensity of the catastrophic healthcare expenditure was highest for the inpatient care. It may be attributable to the fact that inpatient care not only includes consultation fee, travel expenses but other charges like a hospital stay, special diet, regular consultations and investigations etc.

The occupation-wise comparison had shown that 50 percent of the construction worker, 37.6 percent of the vendor and 35.7 percent of the shopkeeper experienced illness. The majority of the respondents from the three occupations availed outpatient care from chemist shops followed by government hospitals and RMP/local doctor. The mean distance covered to visit the healthcare facility by the construction workers, vendors and shopkeepers was 2.68 km, 3.42 km and 2.60 km respectively. However, the mean healthcare expenditure on outpatient care was the highest among the vendors (₹437.84) followed by shopkeepers (₹287.71) and construction workers (₹169.07) respectively. But, the mean man day loss due to illness was the highest among the vendors (3.5 man days) followed by construction workers (2.8 man days) and shopkeepers (1.9 man days) respectively. The mean money loss due to outpatient care was ₹710.71, ₹826.92 and ₹571.43 among the construction workers, vendors and shopkeepers respectively. Thus, it indicates that health insecurities due to outpatient care were the highest among the vendors. The occupation-wise analysis of the inpatient care had shown that 45.7 percent, 44.3 percent and 36.7 of the construction workers, vendors
and shopkeepers experienced inpatient care. But, the majority of them visited private hospitals followed by the government for inpatient care. There was not a much difference in the mean distance covered by the three occupants to visit the healthcare facility. However, the mean healthcare expenditure on inpatient care was the highest among the construction workers (₹26,881.0) followed by shopkeepers (₹22,204.0) and vendors (₹16,235.0) respectively. Whereas, 83.3 percent of the construction worker, 81.7 percent of the vendor and 66.2 percent of the shopkeeper suffered a wage loss due to inpatient care. The mean man days loss to the construction workers, vendors and shopkeepers were 13.8 man days, 10.7 man days and 12.8 man days respectively. The mean and median money loss was ₹3,384.0 (construction worker= ₹2,993.0, vendors= ₹2,740.0 and shopkeepers= ₹6,614.0) and ₹1,600.0 (construction worker= ₹1,600.0, vendors= ₹1,200.0 and shopkeepers= ₹1,700.0) respectively. The mean man days loss to the accompanying person was 2.76 man days (construction worker =2.1 days and vendors=4.5 man) and the median (construction worker =2.0 days and vendors=2.0 days) man days loss was 2.0 days respectively. While, mean and median money loss to accompanying was ₹792.0 (accompanying person of construction worker = ₹2,993.0, accompanying person of vendor= ₹2,740.0 and accompanying person of shopkeeper= ₹6,614.0) and ₹1,600.0 (accompanying person of construction worker = ₹1,600.0, accompanying person of vendor= ₹1,200.0 and accompanying person of shopkeeper= ₹1,700.0) respectively. The results of the incidence of inpatient care had shown that health insecurities due to inpatient care were the highest among the construction workers. The analysis of the data provided that 47.0 percent of the shopkeepers, 36.0 percent the vendors and 35.0 percent the construction workers suffered from the chronic disease. But, 91.9 percent, 78.7 percent and 60.8 percent of the construction worker, vendor and shopkeeper respectively had taken the treatment for their chronic disease. The mean and median distance covered to visit the health facility for chronic disease was 4.18 km, 3.94 km and 3.87 km among the shopkeepers, vendors and construction workers respectively. The mean and median monthly healthcare expenditure on chronic disease was ₹405.0 (construction worker= ₹291.1, vendor= ₹441.5, shopkeeper = ₹437.58) and ₹300.0 (construction worker=₹200.0, vendor=₹300.0, shopkeeper=₹400.0) respectively. It was observed that 20 percent of the construction workers, 13.6 percent of the vendors and 23.1 percent of the
shopkeepers suffered a wage loss due to chronic disease. The mean man day loss to the construction worker, vendor and shopkeepers were 0.67, 1.62 and 1.38 man days respectively. The mean money loss to the construction worker, vendor and shopkeeper was ₹283.0, ₹331.2, ₹302.0 respectively. The mean man days loss to the accompanying person of the construction worker, vendor and shopkeeper were 2.0 man days, 1.3 man days and 1.0 man days respectively. The mean money loss to accompanying person of the construction worker, vendor and shopkeeper were ₹3,600.0, ₹3,266.7, ₹3,230.0 respectively. The analysis of the incidence and intensity of the catastrophic healthcare expenditure had shown that the incidence of catastrophic expenditure was the highest among the construction workers at 5 percent and 10 percent threshold level and as the threshold level increases beyond 10 percent the incidence of catastrophic expenditure shifts to the vendors. But, the intensity (MPG) of catastrophic healthcare expenditure for outpatient care was the highest among the vendors at 10 percent, 20 percent and 30 percent threshold levels. The incidence of the catastrophic expenditure for inpatient care was almost same among the construction workers and vendors but lowest among the shopkeepers. The intensity of the catastrophic expenditure on inpatient was the highest amongst the vendor followed by construction worker and shopkeeper respectively at 5 percent, 10 percent, 20 percent, 30 percent and 40 percent of the threshold level. The highest proportion of respondent who incurred catastrophic expenditure due to chronic disease at 5 percent and 10 percent threshold level were the shopkeepers but as the threshold level rises above 10 percent the burden shifts to the vendors.

The district-wise analysis had shown that 43.0 percent each from Amritsar and Jalandhar followed by 36.7 percent from Ludhiana reported illness episodes and majority of the respondents from the three districts availed the outpatient care. The mean distance covered by the respondents of Amritsar, Jalandhar and Ludhiana to access the healthcare facility was 3.89 km, 2.42 km and 2.22 km respectively. The mean healthcare expenditure on the outpatient care was ₹359.0, ₹336.0 and ₹139.0 for Amritsar, Jalandhar and Ludhiana respectively. However, mean wage loss due to outpatient care was the highest in Amritsar (₹630.0) followed by Jalandhar (₹594.0) and Ludhiana (₹460.0) respectively. The analysis had shown that health insecurities of outpatient care highest in Amritsar. However, an analysis of the inpatient care had shown that highest percent of
the respondents who availed inpatient care belonged to Jalandhar (44.3 percent) followed by Amritsar (41.9 percent) and Ludhiana (40.5 percent) respectively. The majority of the respondents from the three districts visited private hospitals for the inpatient care. The mean expenditure on inpatient care was highest in Ludhiana (₹21,858.8) followed by Jalandhar (₹21,416.7) and Amritsar (₹20,951.7) respectively. It was observed that due to inpatient care 84.0 percent, 15.0 percent and 11.0 percent of the respondents suffered a wage loss in Amritsar, Jalandhar and Ludhiana respectively. However, the mean man days loss due to inpatient care was the highest in Ludhiana (15.4 man days) followed by Amritsar (14.1 man days) and Jalandhar (10.8 man days) respectively. The respondents suffered money loss of ₹3,289.19, ₹2,825 and ₹3,993 in Amritsar, Jalandhar and Ludhiana respectively. The mean man day loss to accompanying person was 2.18 days and 5.0 days in Amritsar and Jalandhar respectively and the mean money loss to accompanying person was almost double in Jalandhar (₹1,333.33) compared to Amritsar (₹645.45). The result indicates that 40.5 percent, 40.0 percent and 37.6 percent in Amritsar, Jalandhar and Ludhiana respectively suffered from the chronic disease. However, 82.4 percent, 73.8 percent and 79.7 percent respondents from Amritsar, Jalandhar and Ludhiana respectively utilized the healthcare facility for chronic disease. The mean distance covered to visit the health facility was the highest in Ludhiana (4.34 km) and equal distance was recorded in Amritsar (3.83 km) and Jalandhar (3.83 km). The mean monthly expenditure on the chronic disease was ₹485.0, ₹414.3 and ₹305.2 in Amritsar, Ludhiana and Jalandhar respectively. However, 25.4 percent, 17.1 percent and 16.1 percent from Ludhiana, Amritsar and Jalandhar respectively suffered wage loss but there was not much difference in the mean and median man days loss due to chronic disease. The mean and median money loss to the accompanying person was ₹315.0 (Amritsar= ₹200.0, Jalandhar= ₹275.0 and Ludhiana=₹366.7) and ₹250.0 (Amritsar= ₹200.0, Jalandhar= ₹250.0 and Ludhiana=₹400.0) respectively.

The analysis of the incidence of the catastrophic healthcare expenditure at different threshold levels had shown that the highest percent of the respondents who incurred catastrophic healthcare expenditure due to outpatient care belonged to Jalandhar followed by Amritsar and Ludhiana respectively. The intensity of the catastrophic expenditure due to outpatient was the highest in Amritsar followed by Jalandhar and
Ludhiana respectively at all threshold levels. The incidence of catastrophic expenditure due to inpatient care was highest in Jalandhar at all threshold levels followed by Amritsar and Jalandhar. But, the intensity of the catastrophic healthcare expenditure for the inpatient care was highest in Jalandhar followed by Ludhiana and Amritsar respectively. The highest percent of the respondents who incurred catastrophic expenditure due to chronic disease belonged to Amritsar followed by Ludhiana and Jalandhar respectively. The intensity of catastrophic expenditure due to chronic was the highest in Amritsar followed by Jalandhar and Ludhiana respectively at all threshold levels. The respondents in the present study not only bear the high medical expenditure and wage loss due but faced serious socio-economic implications such as loss of income in the household, unable to perform duties during illness, saving suffered, sale of household assets, credit/borrow for payment of illness, mortgage of productive assets, loss of employment, temporary loss of job, isolation from family due to my illness, harsh discipline from family members during illness, illness hampered work-relationship and difficult work-life balance during illness.

10.6 Awareness of Health Insurance in the Urban Informal Sector

The analysis of the data clearly shows that 81.3 percent of the respondents were aware of the insurance or Bima. It came in light that insurance was associated with different perceptions such as insurance means money return with interest when premium paid, payment received by the family after death of the insured, money back at sudden death of insured, provides compensation if something bad happens, insurance provides more money when required and money back after the complete duration of insurance, refund of cost of drugs during illness and insurance makes life easier. But, it was observed that 48.3 percent of the respondents were aware of health insurance and the main source of awareness of health insurance were the agents followed by friends, bazaar/local people, TV, family, newspapers, employees of the insurance company, doctor and hoardings/billboards. However, 93.0 percent, 11.7 percent and 4.1 percent had subscribed life insurance, motor insurance and health insurance policies respectively. It was found that respondents hold different opinions about the health insurance. The majority of the respondent’s perceived health insurance as a program to improve health followed by saving tool, compensation for losses from certain events, program useful in
emergency, bulk return in future, tool to improve health, helpful for security purposes, protection against critical illness, protection against all illness and means to alleviate poverty. Thus, it revealed that respondents were not clear about the concept of health insurance and calls for effective awareness campaigns designed to create a better understanding of the concept of health insurance. But, a low level (7.7 percent) of subscription of health insurance was observed among the sampled respondents.

Probit multivariate regression analysis was applied to examine the determinants of awareness of health insurance. The analysis of the Probit regression had shown that out of the different variables district, age, education, occupation, income, religion, type of family, BPL card, the experience of outpatient care, inpatient care and awareness of the insurance were significant. District was significant and directed a significant different in the awareness of health insurance in Amritsar and Jalandhar. The age-wise analysis had shown that respondents with age group of 31-40 years was significantly more aware of health insurance than of above 60 years. This may be due to the fact the young respondents were more active and more participative in nature. It was also found that education of the respondent was directly related to the awareness of health insurance. With the higher education level, people were better aware of the economic consequences of ill health and benefits of enrollment with health insurance. Therefore, a positive association was observed between the education and awareness of health insurance. The Respondents from the joint families were less aware compared to nuclear families and Hindu respondents were less aware than of Sikh. However, gender, marital status, household size and caste were insignificant. The coefficient of occupation highlighted that vendors and shopkeepers were significantly more aware than of the construction workers. The income of the respondent was directly related to the awareness of health insurance. The respondents who hold BPL card were significantly less aware of health insurance. The analysis of the healthcare variables had shown that the experience of outpatient care and inpatient care increased the probability of awareness of health insurance but the experience of chronic disease, wage loss due to outpatient care, inpatient care and chronic disease was insignificant. The awareness of the other forms of insurance was directly associated with the awareness of health insurance. But no
association exists between enrollment of insurance and awareness of health insurance.

Occupation-wise comparison had shown that 93.3 percent, 85.2 percent and 65.2 percent of the shopkeepers, vendors and construction workers respectively were aware of insurance. However, the majority of the construction workers perceived health insurance as a money return with interest when premium paid, the majority of the vendors assumed it as money back at sudden death of insured person and majority of the shopkeepers believed insurance provides more money when required. It was found that majority of the shopkeepers followed by vendors and construction workers subscribed insurance policies. The occupation-wise comparison had shown that enrollment of health insurance and motor insurance was highest among the shopkeepers. However, 23.2 percent of the shopkeepers and 5.2 percent of the vendors had subscribed the health insurance policies. Those who subscribed health insurance cited different reasons for it which shown a lack of clarity of over the concept of health insurance. While, 18.9 percent, 6.5 percent, 4.8 percent of shopkeepers, vendors and construction workers respectively had motor insurance policies. It was observed that 27.6 percent, 42.9 percent and 74.3 percent of the construction workers, vendors and shopkeepers respectively aware of the health insurance which shows that awareness of health insurance was lowest amongst the construction workers and highest amongst shopkeepers.

The occupation-wise analysis of Probit regression revealed that district was associated with awareness of health insurance among the shopkeepers. However, no significant difference was observed in the awareness of health insurance among the construction workers and vendors across the districts. The age was associated with awareness of health insurance among shopkeepers and clearly indicated that younger shopkeeper were more aware of health insurance. Education was directly associated with awareness of health insurance in all the occupations. Type of family was significant among the vendors and directs that vendors belonging to the joint family were less aware than of nuclear families. However, gender, marital status, religion, caste and household size were insignificant in the three occupations. Income was significant among the vendors and provided that vendors with higher income groups were more aware of health insurance than of the lower income groups and vendors with saving account were more aware than without the account. The experience of illness was tested and found
significant. The analysis had shown that construction workers and shopkeepers who experienced outpatient care were significantly more aware of health insurance. But, vendors who experienced inpatient care, wage loss due to inpatient care and wage loss due to chronic disease were more aware of health insurance. The awareness of health insurance was directly related to the awareness of other forms of insurance in the three occupations. The enrollment of insurance was associated with the vendors and shown that vendors who enrolled with insurance (other than health) were aware of health insurance also.

The district-wise analysis had shown that 83.8 percent, 83.3 percent and 76.7 percent of the respondents from Amritsar, Jalandhar and Ludhiana respectively were aware of insurance. The majority of the respondents from Amritsar perceived insurance as the money return with interest when premium paid. In Jalandhar, respondents associated insurance with the money back at the sudden death of insured person while in Ludhiana majority of the respondent believed insurance as money return with interest when premium paid and payment received by the family after the death of the insured. The analysis of the data had shown that 36.7 percent, 36.2 percent and 29.0 percent from Ludhiana, Jalandhar and Amritsar respectively subscribed insurance policies. The comparison of three districts revealed that more of the life insurance and health insurance policies were subscribed by respondents from Ludhiana and motor insurance and general insurance by the respondents of Amritsar. It was found that 51.4 percent of the respondents from Amritsar and 46.7 percent each in Jalandhar and Ludhiana was aware of health insurance. The majority of the respondents from Amritsar and Ludhiana perceived health insurance as a program to improve health and saving tool. But majority from Jalandhar perceived it as a means to improve health. Those who subscribed health insurance, 16.7 percent from Amritsar and 40.0 percent from Ludhiana had renewed their health insurance policies.

District-wise analysis of the Probit regression coefficient had shown that age was significantly associated with awareness of health insurance in Ludhiana only. The coefficient of age had shown that younger respondents were more aware of health insurance than of elder in Ludhiana. Education was also directly associated with awareness of the health insurance in all districts. However, respondents from Amritsar of
up-to primary, above primary and up-to secondary, senior secondary, graduate and post graduate were more aware than of illiterate. The respondents with above primary and up to secondary and senior secondary were more aware than of illiterate from Jalandhar. In Ludhiana, those without formal education but can read and write, up to primary, above primary and up to secondary, senior secondary and post graduate were more aware than of illiterate. Type of family was significant in Ludhiana and proved that respondents from joint families were less aware than of nuclear families. Household size and religion was significant in Ludhiana and provided the fact that large household size increased awareness of health insurance. It was also noticed from the regression coefficient that in Ludhiana respondents from others religion was less aware than of Sikh. However, out of the different demographic variables gender, marital status and caste were not related to any district. Income was significant in all the districts and the regression coefficient had shown that income was directly associated with awareness of health insurance in Amritsar and Jalandhar but it was inversely related to the awareness in Ludhiana. Holding BPL card was inversely related to awareness of health insurance in Ludhiana and respondents with BPL card were less aware than of without BPL card. Holding saving account positively affects the awareness of health insurance in Amritsar and Jalandhar. The respondents who experienced outpatient care in Amritsar and Ludhiana were more aware of health insurance. The wage loss due to outpatient care also affects the awareness of health insurance in Jalandhar and it was found that those who suffered wage loss were less aware than who had not suffered the wage loss. The distance to health facility, inpatient care, chronic disease, wage loss due to inpatient care and chronic disease were not associated with the three districts. The awareness of insurance was associated with awareness of health insurance across the three districts. But, enrollment of other forms of insurance was associated with awareness of health insurance in Amritsar and Jalandhar. It can be concluded on the basis of regression coefficient that probability of awareness of health insurance rises with a rise in the other form of awareness of insurance in all districts. However, the probability of awareness of health insurance rises with a rise in the enrollment of insurance in Amritsar and Jalandhar respectively. Hence, it can be concluded that the socio-economic variables do play an important role in awareness on health insurance.
10.7 Demand and Capacity to Pay for Health Insurance in Urban Informal Sector

An effort was made to examine the demand and capacity to pay for health insurance in the urban informal sector. It was found that 67.5 percent of the respondents were willing to join and 64.8 percent were willing to pay for the health insurance. Those who were not willing to pay for the health insurance stated shortage of funds, irregular income and availability free health care facilities. The mean and median willingness to pay for the health insurance was ₹473.35 and ₹364.1 respectively. However, the majority of the respondents would like to pay the premium half-yearly followed by yearly, quarterly and monthly. The preferred way to make payment for health insurance was bank followed by insurance agents, offices of the insurance company and post office respectively. It was observed that 85.0 percent of the respondents had shown their preference for the hospitalization expenses to be covered in the health insurance policies, 77.0 percent the cost of drugs, 59.1 percent investigations, 52.0 percent primary care, 22.1 percent maternal care and delivery and 4.2 percent wage loss in the health insurance policies. It was noticed that 38.7 percent of the respondents preferred the richness of benefits, 25.5 percent affordability, 21.6 percent reputation of the insurance company and 14.2 percent access to physicians. A majority of respondents had shown the preference for the comprehensive policies over the individual policies. While, 51.7 percent of them wanted to buy health insurance policies with partial money back/saving at little higher cost than normal policies at a lower cost.

The determinants of willingness to pay for health insurance were identified with the Probit multivariate regression. The regression coefficient had shown that district was insignificant and leads to the conclusion that no significant difference exists in willingness to pay for health insurance in the three districts. The marital status was statistically significant and provided that respondents with single status were 11.7 percent less likely to pay for health insurance than of married. The respondents with age groups of up to 30 years and 31-40 years were 16.2 percent and 12.7 percent more likely to pay than of above 60 years. The education of the respondent was directly linked with the willingness to pay for the health insurance and it was found that those who were above primary and up to secondary, senior secondary and graduate were 13.1 percent, 16.5
percent and 21.1 percent more likely to pay than of illiterate. The religion-wise difference exists in the willingness to pay for health insurance and directed that Hindu respondents were less likely to pay for the health insurance than of Sikh. The respondents from the joint families were 14.3 percent less likely to pay than of nuclear. The respondents with a household size of 4-5 members were 15.0 percent less likely and household size of 6-7 members were 14.1 percent more likely to participate than of up to 3 members. However, the gender of the respondent and caste were insignificant. It was observed that respondents with an annual income of ₹1,50,001-₹2,00,000 and ₹2,00,001-₹2,50,000 were 23.8 percent and 18.7 percent more likely to pay than respondents with an income of up to ₹50,000. The ownership of the house and agricultural land directly related to the willingness to pay for health insurance. It was observed that those with pucca houses were more likely to pay than of the kaccha houses. The consumption expenditure was inversely related to the willingness to pay for the health insurance. There also exists a significant difference in the willingness to pay for health insurance across the three occupation groups. The distance to visit healthcare facility was negatively associated with the willingness to pay for health insurance. The respondents who suffered wage loss due to inpatient care were significantly more likely to pay for it. The regression coefficient shows that those who were aware of insurance were significantly less likely to pay for health insurance and those who were aware of health insurance were significantly more likely to pay for it. There exists a direct relation between enrollment with other forms of insurance and willingness to pay for health insurance.

The occupation-wise comparison had shown that 76.7 percent of the construction workers, 66.2 percent of vendors and 59.5 percent of shopkeepers were willing to join for the health insurance. However, 73.3 percent, 63.3 percent and 57.6 percent of the construction workers, vendors and shopkeepers respectively were willing to pay. Out of those who were not willing to pay for health insurance, 98.0 percent, 74.6 percent, and 50.6 percent of the construction workers, vendors and shopkeepers respectively were willing to pay. Out of those who were not willing to pay for health insurance, 98.0 percent, 74.6 percent, and 50.6 percent of the construction workers, vendors and shopkeepers respectively were willing to pay. Out of those who were not willing to pay for health insurance, 98.0 percent, 74.6 percent, and 50.6 percent of the construction workers, vendors and shopkeepers respectively were willing to pay. Out of those who were not willing to pay for health insurance, 98.0 percent, 74.6 percent, and 50.6 percent of the construction workers, vendors and shopkeepers respectively were willing to pay.
workers, vendors and shopkeepers respectively. The median willingness to pay for the health insurance was ₹329.9, ₹242.5 and ₹712.0 of the construction workers, vendors and shopkeepers respectively. It was found that 61.0 percent of the construction workers, 48.9 percent of the vendors and 43.8 percent of shopkeepers wanted to include primary care, 82.5 percent of the construction workers, 87.2 percent of vendors and 86.0 percent of the shopkeepers wanted hospitalization expenses, 23.4 percent, 24.1 percent and 18.2 percent of the construction workers, vendors and shopkeepers respectively wanted to include maternal healthcare and delivery charges. The cost of drugs was demanded by 73.4 percent, 78.2 percent and 80.2 percent of the construction workers, vendors and shopkeepers respectively. On the other hand, 55.8 percent, 59.4 percent and 62.8 percent of the construction workers, vendors and shopkeepers respectively wanted to include investigations in the health insurance package. Only, 4.5 percent, 3.0 percent and 50 percent of the construction workers, vendors and shopkeepers respectively had shown their willingness to include wage loss in health insurance schemes. The respondents from all the occupations wanted a package which consists of the richness of benefits followed by affordability, access to physicians and reputation of the insurance company. The majority of the respondents from the three occupations had shown their preference for the comprehensive policies over the individual.

Occupation-wise difference exists in the determinants of willingness to pay for health insurance. An analysis of the regional variable had shown that construction workers from Jalandhar were significantly less likely to pay for health insurance than of construction workers from Amritsar. The vendors from Jalandhar and Ludhiana were significantly more likely to pay for health insurance than the vendors from Amritsar. There was not a significant difference in the willingness to pay for health insurance among the shopkeepers from three districts. The age was associated with the shopkeepers and the regression coefficient had shown that shopkeepers of up to 30 years and 31-40 years were significantly more likely to pay than of above 60 years. It was found that Hindu construction workers were significantly less likely to pay for health insurance as compared to Sikh. The caste was significant among the vendors and regression coefficient had shown that vendors of general caste were less likely to pay than of SC. The construction workers with above primary and up-to secondary education were
significantly more likely to pay than of illiterate counterparts. The shopkeepers with primary, above primary but up-to secondary, graduate and post graduate were significantly more likely to pay for the health insurance than of illiterate. The coefficient of household size was significant in all occupations. Thus, it provided that construction workers and vendors with a household size of 6-7 members and construction workers with a household size of more than 9 members were significantly more likely to pay for health insurance compared to up to 3 members. But, shopkeepers with a household size of 4-5 members significantly less likely to pay as compared to shopkeepers with a household size of up to 3 members. There was no significant difference in the three occupations on the basis of gender; marital status and type of family were not significant.

The occupation-wise comparison of economic variables had shown that that income was significantly associated with the construction workers and shopkeepers. The construction workers with an annual income of ₹1,00,001- ₹1,50,000 and shopkeepers with annual income of ₹1,50,001- ₹2,00,000 and ₹2,00,001- ₹2,50,000 were more likely to pay for health insurance than of up to ₹50,000. The shopkeepers, who own houses were significantly more likely to pay for health insurance than those who were lived in the rented houses. It can be concluded that ownership of house increases the willingness to pay for health insurance. It was found that construction workers with semi-pucca and pucca houses were significantly more likely to pay than of kaccha house. The saving account and BPL card were significant among the shopkeepers and it leads to the conclusion that those who had a saving account and BPL card were likely to pay for the health insurance. Consumption expenditure of the construction workers was inversely associated with the willingness to pay for health insurance and revealed that construction workers with high consumption expenditure were less likely to pay for health insurance. Out of the different healthcare variables, distance to the health facility was inversely related to the willingness to pay among the vendors and shopkeepers. The construction workers who experienced wage loss due to outpatient care were less likely and vendors who experience of wage loss were significantly more likely to pay for the health insurance. Vendors who experienced hospitalization were significantly more likely to pay for health insurance. It was found that construction workers with the experience of wage loss due to hospitalization were more likely to pay and with the experience of wage loss
due to chronic disease were less likely to pay for health insurance. It has been observed that none of the insurance variable was associated with willingness to pay for health insurance across the three occupations.

The district-wise comparison had shown that 66.2 percent, 67.1 percent and 69.0 percent of the respondents from Amritsar, Jalandhar and Ludhiana respectively were willing to join for the health insurance. But, it was 63.3 percent from Amritsar, 62.9 percent from Jalandhar and 68.1 percent from Ludhiana who were willing to pay for health insurance. The mean and median willingness to pay for health insurance was ₹473.35 (Amritsar=₹400.38, Jalandhar=₹508.52 and Ludhiana=₹508.74) and ₹364.1 (Amritsar =₹338.63, Jalandhar=₹406.86 and Ludhiana =₹345.93) respectively. The majority of the respondents from all the districts agreed to make payment for health insurance on half-yearly basis followed by yearly, quarterly and monthly. The majority of them preferred to make payment by through bank. However, 57.9 percent, 38.6 percent and 58.7 percent of the respondents from Amritsar, Jalandhar and Ludhiana wanted to include primary care in the health insurance, 90.9 percent, 87.2 percent and 77.6 percent from Jalandhar, Amritsar and Ludhiana respectively hospitalization expenses, 29.4 percent, 18.0 percent and 18.2 percent from wanted to include maternal care and delivery services in Ludhiana, Amritsar and Jalandhar respectively. Whereas, 75.2 percent from Amritsar, 79.5 percent from Jalandhar and 76.2 percent from Ludhiana wanted to include the cost of drugs in health insurance policies, 65.9 percent in Jalandhar, 59.4 percent in Amritsar and 52.4 percent in Ludhiana respectively would like to include investigations in health the insurance products. A small proportion of the respondents (Amritsar =3.0 percent, Jalandhar= 6.1 and Ludhiana =3.5 percent) wanted to include the wage loss in health insurance policies. The majority of the respondents from the three districts expressed their desire to include richness of benefits, comprehensive policies and policy with partial money back/saving at little higher cost.

The district-wise comparison of determinants of willingness to pay for health insurance had shown that male from Jalandhar were less likely to pay for health insurance than female and in Ludhiana male were more likely to pay for health insurance than of female. The marital status was associated in Jalandhar and on the basis of results it was found that married respondents were more likely to pay than of single. The respondents
of up to 30 years were significantly more likely to pay than of above 60 years in Amritsar. Respondents of 51-60 years were significantly less likely to pay than of above 60 years in Jalandhar. But respondents from Ludhiana of up to 30 years, 31-40 years and 41-50 years were more likely to pay for the health insurance than of the above 60 years. The religion was associated in Jalandhar and revealed that respondents of Hindu religion were less likely to pay than of Sikh. Respondents from the joint family were 21.1 percent less likely to pay than of nuclear families in Jalandhar. However, respondents in Amritsar with above primary and up-to secondary and graduation were significantly 15.8 percent and 25.4 percent more likely to pay than of illiterate. Respondents with a household size of 4-5 members were 10.2 percent less likely to pay than of up to 3 members and with 6-7 members were 20.2 percent more likely than of up to 3 members in Jalandhar. Income was directly associated with the willingness to pay for health insurance. Respondents with income of ₹50,001-₹1,00,000, ₹1,00,001-₹1,50,000 and ₹2,00,001-₹2,50,000 from Amritsar and ₹2,00,001-₹2,50,000 from Ludhiana were more likely to pay than of ₹50,000. The ownership of house and type of house significantly associated with the willingness to pay for health insurance in Amritsar. Holding a saving account was inversely related to willingness to pay for health insurance in Jalandhar and directly in Ludhiana. The ownership of the agricultural land rises the probability of paying for health insurance by 30.6 percent and 17.9 percent in Amritsar and Ludhiana respectively. The occupation was insignificant and thereby leads to the conclusion that there was no significant difference in willingness to pay for health insurance across the three occupations. Distance to visit health facility was negatively associated with the willingness to pay in Jalandhar and Ludhiana. The incidence of the inpatient care and wage loss due to inpatient care was directly related to willingness to pay for health insurance in Amritsar and Ludhiana respectively. The experience of chronic disease directly affects the willingness to pay for health insurance in Ludhiana. Wage loss due to chronic disease inversely affects the willingness to pay for health insurance in Jalandhar. The coefficient of awareness of insurance, awareness of health insurance and enrollment of insurance was associated with willingness to pay for health insurance in Amritsar only. On the basis of the regression coefficient, it can be concluded that willingness to pay for health insurance directly related to the awareness of insurance, awareness of health insurance and enrollment with other insurance policies.
10.8 Problems in Enrollment of Health Insurance of Urban Informal Sector

Health insurance can protect the poor and informal sector worker against the catastrophic health care payments (Swarup, 2008). But, enrollment of health insurance is low in India compared to other countries (Dutta, 2012). There are many factors which hinder the enrollment of health insurance. Thereby, an attempt was made to explore the factors responsible for the low enrollment of health insurance among the urban informal sector. The analysis was done with the help of factor analysis. The value of Cronbach alpha was 0.842 and indicates internal consistency. Thereafter, sampling adequacy was ascertained by Kaiser-Meyer-Olin (KMO) and found to be 0.789. The overall significance of the correlation matrix was tested with Bartlett test (chi-square=6201.00, significant at 0.000) at 630 degree of freedom. However, factor 1 explained 6.544 percent of the total variance and consisted of five variables, factor 2 explained 5.970 percent of the total variance and included three variables, factor 3 explained 5.696 percent of the variance and consist of two variables, factor 4 highlighted 5.522 percent of the total variance and contained three variables, factor 5 revealed 5.423 percent of total variance and consist of four variables, factor 6 constituted four variables and explained 5.41 percent of the total variance, factor 7 contained 5.205 percent of variance, factor 8 highlighted 4.985 percent of variance and included three variables, factor 9 explained 4.884 percent of total variance and consist of two variables, factor 10 included 4.728 percent of total variance and consist of four variables, factor 11 explained 4.274 percent of variance and consist of four variables and finally factor 12 explained 3.563 percent of the total variance and comprised two variables. Thus, factors which act as a barrier to the enrollment of health insurance were lack of awareness and need to buy health insurance, comprehensive coverage, income constraint, procedural formalities and complications, liquidity constraint, opportunity cost, future contingencies other than health, lack of information, subsidized government healthcare, linkage with government hospitals, preference for government schemes and lack of confidence. Therefore, insurers of health policies should focus on these factors while designing health insurance products for the informal sector and lower income groups.
The occupation-wise comparison had shown that thirteen factors restrict the enrollment of the construction worker, twelve factors the enrollment of vendors and ten factors the enrollment of the shopkeepers. The comparison was helpful to understand the factors which restrict the enrollment of a particular occupation. Factor 1, which obstruct the subscription of the construction workers, vendors and shopkeepers were the income constraint, preference of government schemes and the lack of awareness about need to buy health insurance respectively. Factor 2 was common among the construction workers and shopkeepers and defined as comprehensive coverage. But, it was the lack of awareness about the need to buy health insurance among the vendors. Factor 3 was the lack of awareness about the need to buy health insurance among the construction workers and it was the need of money for daily transactions among vendors and health insurance should be provided by government among the shopkeepers. Factor 4 which restrict the enrollment of the construction workers were social obligations among vendor’s procedural formalities and complications and it was income constraint among the shopkeepers. The procedural formalities, comprehensive coverage and future contingencies and social obligations were the factor 5 among the construction workers, vendors and shopkeepers respectively. However, lack of information about health insurance was termed as factor 7 among the vendors and shopkeepers respectively. But, it was future contingencies and social obligations among the vendors. While future contingencies, lack of information and cheap and affordable health insurance were the factor 8 among the construction workers, vendors and shopkeepers respectively. It was found that factor 9 which posed hindrance in enrollment of health insurance was liquidity constraint, lack of awareness and lack of trust among the construction workers, vendors and shopkeepers respectively. Factor 10 was money loss, preference of other modes of investment and liquidity constraint among the construction workers, vendors and shopkeepers respectively. There were only ten factors which restrict the shopkeepers to buy health insurance. However, factor 11 was common among the vendors and shopkeepers and named as lack of trust on health insurance policies. Factor 12 was the preference for government schemes and liquidity constraint among the construction workers and vendors respectively. Finally, factor 13 was named as linkage with government hospitals among the construction workers.
The district-wise comparison exhibits that eleven factors restrict the enrollment of health insurance in Amritsar, ten factors in Jalandhar and twelve factors in Ludhiana. Thus, it clearly indicates that three districts were associated with different factors and understanding of these factors is essential to design health insurance products as per the actual needs of the respondents. It was observed that lack of awareness about the need to buy health insurance, income constraint and lack of information was the factor 1 in Amritsar, Jalandhar and Ludhiana respectively. But factor 2 was need for government intervention, difficult to avail healthcare services and lack of awareness about the need to buy health insurance in Amritsar, Jalandhar and Ludhiana respectively. However, comprehensive coverage was factor 3 in Amritsar, lack of awareness about the need to buy health insurance was in Jalandhar and income constraint in Ludhiana. Factor 4 was the opportunity cost, comprehensive coverage and preference of other modes of investment in Amritsar, Jalandhar and Ludhiana respectively. However, income constraint, the need of government intervention and risk involved was factor 5 in Amritsar, Jalandhar and Ludhiana respectively. While, lack of availability and access to health care services, social obligations and future contingencies was the factor 6 in Amritsar, Jalandhar and Ludhiana respectively. Factor 7 was the lack of information about health insurance, peer pressure and comprehensive coverage in Amritsar, Jalandhar and Ludhiana respectively. But, factor 8 was social obligations in Amritsar, lack of information in Jalandhar and liquidity constraint in Ludhiana. Factor 9 was the preference of government schemes, low-risk capacity and the need for government intervention in Amritsar, Jalandhar and Ludhiana respectively. The cheap and affordable health insurance products were termed as factor 10 in Amritsar but in Jalandhar, it was the family decision and Ludhiana it was peer influence. Factor 11 was the lack of trust on health insurance programs in Amritsar and difficult to avail health services in Ludhiana. Finally, factor 12 was the lack of trust in Ludhiana.

10.9 Policy Implications and Suggestions

It was concluded from the above analysis that availability, accessibility and affordability of health care services are the prime concern among the informal sector workers. Therefore, the suggestions mentioned in the study will help to increase the health security and penetration of health insurance in the country in general and informal sector as particular:
The government should improve the working conditions of the informal sector workers by ensuring the availability of good living conditions and sanitation facilities at their workplaces along with accessible and accountable occupational health care services.

There is a need to give a clear understanding of the concept of health insurance and its potential benefits to workers employed in the informal sector.

Health insurance policies should be designed or customized according to the actual need of the informal sector workers compatible with widely prevailing disease patterns.

There is a need to design special health insurance schemes offering mass insurance at a highly subsidized rate. While formulating health insurance schemes, cashless health insurance schemes should be designed specifically for the informal sector.

There is immediate need to clarify and simplify the procedures involved in the health insurance policies in order to bring clarity and transparency.

Agents should be given special training and guidance to specifically approach workers employed in the informal sector and to guide them on the various aspects of health insurance.

Health insurance schemes for the informal sector should take care of not just the inpatient or hospital care, but also of the outpatient care.

In order to increase the outreach of health insurance to informal sector, the insurance companies should involve local government, cooperatives, non-governmental organizations, microfinance institutions and other grass root organizations.

10.10 Scope of Further Research

Further research can be carried out to cover the following areas:

- Service quality analysis of Indian general insurance companies with respect to health insurance business.
- Incidence and intensity of catastrophic health care expenditure among the urban informal sector.
- Evaluation of the existing health insurance schemes meant for informal sector workers.
• Critical analysis of the role of NGO’s and cooperative societies in the provision of health care services to the informal sector workers.
• To estimate the demand for health insurance among the rural households.
• Comparative analysis of individuals with and without health insurance coverage.

10.11 Conclusion

The above discussion clearly highlights that workers employed in informal sector rely heavily on out-of-pocket healthcare expenditure. This led to a tremendous burden on them and resulted in indebtedness and liquidation of their productive assets. Therefore, informal sector workers without any formal health insurance, bear dual burden of healthcare expenditure as well as loss of income during illness. This widens the health insecurities among informal sector household who survives on low and irregular income. The study addresses the policy makers to ensure the health safety and financial protection of informal sector workers. Therefore, deliberate steps must be taken by the government to ensure that access to health care services should be improved and sustained particularly for informal sector workers. Health insurance can be a viable option against catastrophic healthcare spending. But, it was observed that the subscription of health insurance is very low among the sampled respondents. Effective education and special campaigns can increase the subscription of health insurance to informal sector workers. Therefore, specific insurance schemes should be designed or customized towards the needs of the informal sector workers compatible with widely prevailing disease patterns. Despite the low and irregular income, majority of the respondents expressed their desire to participate in the health insurance. The present study clearly describes the potential to enhance the penetration of health insurance to the informal sector. Thereby both the public and private general insurers should devise the health insurance products as per the actual needs and the actual paying capacity of these workers. The respondent of the present study expressed their desire for the health insurance policies which are affordable, accessible and involves hassle free procedures. These are the important issues regarding formulation, design, operation and management of an affordable health insurance scheme for low-income households. The present study identified that enrollment of health insurance was directly associated with type of illness, coverage of services and amount of the premium. Health insurance products and services require
continuous tailoring in order to attract informal sector workers. The study could also help the insurance companies, government and health policy makers, to develop strategies to enhance penetration of health insurance in the informal sector. Moreover, it has been observed that the overall market of health insurance in India is still untapped due to the challenges such as inadequate healthcare infrastructure, limited reach, lack of data on Indian disease pattern, adverse selection and moral hazard. Hence, to increase the penetration of health insurance among informal sector, it is required to understand informal sector worker’s awareness and perceptions towards health insurance and develop a product which is accessible, available, affordable and acceptable to the informal sector.