CHAPTER-1
INTRODUCTION

1.1 Background:

Health plays an important role in modern economic growth and a healthy work-force is recognized as the key to economic growth and sustainable development. Economic progress in present times has been built on human capital (good health - longer, healthier, more productive human lives). Various economists have shown that a two way relationship exists between health and economic prosperity.

Empirical studies have demonstrated that the effect of economic growth on the population’s health is positive and statistically significant. For example; richer countries are on average healthier than low income countries. In a seminal paper Preston (1975) drew an extraordinary graph demonstrating the curvilinear relationship between income (national income per head) and health (life expectancy) in the 1930s and 1960s. This paper propelled many economists to investigate the relationship between economic prosperity and health. Some of the seminal articles such as; Pritchett and Summers (1996); Martin et al. (2008); Bloom and Canning (2008) confirmed that “Wealthier is Healthier”.

The reverse causal relationship between economic prosperity and health (“Healthier is wealthier”) is also found in literature to be substantial both theoretically and empirically. Theoretically, health can be considered economically beneficial from three points of view. Firstly, from the ‘human-centred view’, it is an additional benefit of reaching the human end-point (health). Secondly, from the ‘capabilities approach’, it is further evidence of income and health as mutually reinforcing factors in the expansion of people’s freedoms. Finally, it can be considered as a “return” on the investment in health, known as the ‘human capital’ viewpoint. Some of the empirical studies like Fogel (1994); Barro (1997) Bloom and Malaney (1998), Rivera and Currais (1999 a,b) proved that health accounted for higher economic growth.
Realizing the importance of health as a driver of economic prosperity, developing countries are striving to spend higher percentage of their GDP on healthcare. However, governments of developing countries such as India are facing a major challenge of allocating higher percentage of their scarce resources towards health sector, since it does not give short term immediate gains as expected in a neoliberalised environment. The resulting inequality in health indicators across socio-economic groups calls for policy interventions that aim at equitable growth of the healthcare sector. The disparity in health outcomes mainly exists in the form of socio-economic groups primarily due to differences in the levels of healthcare utilisation. The disparity in utilisation is mostly due to fear of unforeseen high out-of-pocket (OOP) expenditure that has to be borne to avail healthcare services (Prinja et al., 2013).

Individuals belonging to socio-economically backward groups are more vulnerable to illness and its consequences, since a health shock usually affects these groups the most (Dror and Jacquier 1999; Morrisson 2002; Cohen and Sebstad 2003). Poverty breeds ill health and ill-health results in impoverishment and indebtedness (Wagstaff, 2002). The frequent occurrence of ill-health can easily grind down hard laboured earnings and trap households quickly back into poverty. Ill-health also threatens income earning capacity of the poor and low income households by reducing labor supply and productivity. The illness episode involves both direct and indirect costs. Direct costs comprises of the costs for treatment and drugs, whereas indirect costs include foregone wage & productivity of the ill person as well as of the family members attending to that person. To cure diseases and ill health, patients and their families have to go for out-of-pocket expenditures (Uplekar et al., 2001). The huge OOP expenses, in turn, weaken income generation of the household or individual, and as a consequence puts at risk future economic welfare (Gertler & Gruber, 2002). Under the stress and anxiety of disease, some people have no choice but to pay the fees requested by health providers although the money is more than that which they can afford (Russell, 1996). Households accept to trade future welfare of all its members against access to healthcare for one of them, perceived as essential for survival. Thus, future welfare is put at risk by incurring debts, selling off productive assets, or sacrificing investment in future productivity, for example by curtailing children’s education (Whitehead et al., 2001). Such coping mechanisms can
trigger a vicious circle of impoverishment and more indebtedness (Wilkes et al., 1998).

In addition to the above problem, a large portion of developing and underdeveloped countries’ population depend upon informal sources for seeking healthcare. Due to the fear of high healthcare costs and its impoverishing impact, quite often, people take recourse to traditional healers, self-medication and drug sellers for medication. All the above options are not at preferable and desirable as they are risky and of lower quality compared to professional care. The risks stem from, (i) incorrect self-diagnosis and self care; (ii) absence of specialized knowledge of alternative treatments; (iii) abuse of medications due to incorrect dosage and duration of use; (iv) dangers of side-effects and neglect of interactions with other drugs. Above all, over the years, healthcare has been becoming costlier. Costly healthcare also deters people from using health services thereby generating prolonged or worsened health problems (Gilson, 1998; Russell, 2004) and the evidence to this effect is found more among socio-economically backward groups. Therefore, providing health security to the low income and vulnerable household is very much important to bring equity in healthcare.

In view of the above background, in recent years, health security to the vulnerable sections is increasingly being recognized as integral part of any poverty reduction strategy. Accordingly, there has been a shift in approach to reduce poverty through social risk management where provision of health insurance as a means to curb the health risk has been given importance. This shift is also driven by a growing agreement among researchers and policy makers on the role that risk plays in the lives of the poor (Holzmann & Jorgensen, 2000). The provision of health insurance is looked upon as a better option as it meets the requirements of timely access to healthcare facilities and contains catastrophic expenditure. Therefore, according to Dror et al. (2005) promoting health insurance is a rational and powerful response as it serves the insured by significantly increasing access to healthcare. Health insurance is a viable solution in terms of promoting efficiency and equity in the health care sector (Churchill 2006). Hence, multilateral development organisations have been encouraging developing and under developed countries to expand the provision of health insurance to the low income and unorganised sector workers. As a result,
various government and non government health insurance schemes have been scaled up in recent years in developing countries, with India being no exception.

1.1.1 Health, Healthcare Utilisation, Health Expenditure & Health Insurance Scenarios in India: A Snapshot

India has emerged as a leading global economic powerhouse since liberalisation of its economy during 1991. Over the past two decades, India has forged ahead of its neighbouring countries in terms of economic development whereas it has lagged in terms of health indicators (see Table-1.1). For example, the life expectancy at birth in India is 65, lower than Nepal (67), Sri Lanka (71) and China (74). Other indicators like IMR, MMR and under five mortality rates are quite high in India than its neighbouring countries except Pakistan. The difference in health status among socio-economic groups is also evident in India. According to NFHS-3 report, the prevalence of IMR, under five mortality and percentage of underweight children is higher among lower castes such as SC (64.4, 88.1 and 47.9) and ST (62.1, 95.7 and 54.5) as compared to OBC (56.6, 72.8 and 43.2) and other castes (48.9, 59.2 and 33.7).

Some of the healthcare utilisation indicators like; mothers who had at least 3 antenatal care visits for their last birth stands at 50.7 percent, births assisted by a doctor/nurse/LHV/ANM/other health personnel was at 48.8% and institutional births has been recorded at at 40.8 percent (Ibid). There is a difference in inpatient service utilisation between rural (2.3 percent) and urban population (3.1 percent). The spells of ailments not treated during 15 days in rural and urban areas are 18 percent and 11 percent respectively. The reason for no treatment due to financial constraints is 28 percent and 20 percent in rural and urban areas respectively. Considering monthly per capita consumption (MPCE) as a proxy for level of living, a positive association between level of living and the rate of hospitalisation in both rural and urban areas is seen (NSS report, 2006). Disparities also exist in healthcare utilisation among socio-economic groups.

Healthcare utilisation behaviour in terms of choosing healthcare providers is changing over the years for both inpatient and outpatient services. For instance, the role of government and non government institutions has reversed between the periods 1986-87 and 2004. About 60 per cent of the hospitalised cases were treated by the government institutions in 1986-87 (Ibid) vis-a-vis 42 percent in 2004. This is
because of low level of quality services available at government institutions (Ager and Pepper, 2005; Dalal and Dawad, 2009; De Costa and Diwan, 2007). People are forced to take shelter at private healthcare institutions despite the higher costs therein. As a result, there exists a huge incongruity in health outcomes among socio-economic groups.

International experience shows that developed countries have better health indicators than the underdeveloped countries. For example, OECD countries enjoy better health outcome than any other countries. They account for less than 20 per cent of the world’s population in the year 2000 but were responsible for almost 90 per cent of the world’s health spending. Therefore, 80 per cent of world’s population spent only 10 per cent of the total expenditure on health (Economic Research Foundation, 2006). As far India is concerned, we find poor health outcome due to inadequate public spending (Duggal, 2007). If we compare India to its neighbouring countries with respect to health expenditure, the total health expenditure as percentage of GDP is only 4.2 percent. This is lower than what China (5.1 percent) and Nepal (5.5 percent) spend (see Table-1.1). As far as government expenditure on health as percentage GDP is concerned India spends less than China, Nepal and Sri Lanka. A similar level of spending is also found in case of government expenditure on health as a percentage of total health expenditure. This low level of government expenditure leads to increasing private expenditure. Both private expenditure on health as percentage of total health expenditure (THE) and private expenditure on health as percentage of GDP is higher in India than most of its neighbouring countries. In both private and total health expenditure, the component of household OOP expenditure share is 86.4 percent and 60.2 percent.

Moreover, there is a growing concern over high share of OOP expenditure in total health financing in developing countries (Peters et al. 2002; Wagstaff and Van Doorslaer 2003; Russell 2004; van Doorslaer et al. 2006) and its consequences in terms of impoverishment due to catastrophic expenditure (Xu et al. 2003; O’Donnell et al. 2007), such as that existing in India. Sakthivel and Karan (2009), using various rounds of NSS unit level data, estimated that OOP expenditure has increased from 5.12 to 6.12 percent of total household expenditure during the period 1993-94 and 2004-05. The impact is more evident in rural areas wherein OOP expenditure has increased from 5.3 to 6.5 percent. The overall poverty after accounting for OOP
expenditure increases from 2.9 to 3.6 percent of total population during the said period. In the absence of an efficient healthcare financing mechanism, any ill-health episode can be catastrophic to poor households.

Table 1.1: Health and Health Expenditure Indicators of India and its Neighbouring Countries in 2009

<table>
<thead>
<tr>
<th>Indicators/Countries</th>
<th>Sri Lanka</th>
<th>Bangladesh</th>
<th>Nepal</th>
<th>Pakistan</th>
<th>China</th>
<th>India</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life expectancy at birth</td>
<td>71</td>
<td>65</td>
<td>67</td>
<td>63</td>
<td>74</td>
<td>65</td>
</tr>
<tr>
<td>Infant mortality rate</td>
<td>13</td>
<td>41</td>
<td>39</td>
<td>70</td>
<td>17</td>
<td>50</td>
</tr>
<tr>
<td>Maternal mortality ratio</td>
<td>39</td>
<td>340</td>
<td>380</td>
<td>260</td>
<td>38</td>
<td>230</td>
</tr>
<tr>
<td>Under-five mortality rate</td>
<td>16</td>
<td>52</td>
<td>48</td>
<td>87</td>
<td>19</td>
<td>66</td>
</tr>
<tr>
<td>General govt. expd. on health (GGHE) as % of Total health expd. (THE)</td>
<td>46.2</td>
<td>33.0</td>
<td>32.0</td>
<td>34.8</td>
<td>52.5</td>
<td>30.3</td>
</tr>
<tr>
<td>General govt. expd. on health as % (GDP)</td>
<td>1.5</td>
<td>1.1</td>
<td>1.7</td>
<td>0.8</td>
<td>2.7</td>
<td>1.3</td>
</tr>
<tr>
<td>Pvt. expd. on health (Pvt. HE) as % of THE</td>
<td>53.8</td>
<td>67.0</td>
<td>68.0</td>
<td>65.2</td>
<td>47.5</td>
<td>69.7</td>
</tr>
<tr>
<td>Pvt. expd. on health as % (GDP)</td>
<td>1.7</td>
<td>2.3</td>
<td>3.7</td>
<td>1.4</td>
<td>2.4</td>
<td>2.9</td>
</tr>
<tr>
<td>THE as % (GDP)</td>
<td>3.2</td>
<td>3.4</td>
<td>5.5</td>
<td>2.2</td>
<td>5.1</td>
<td>4.2</td>
</tr>
<tr>
<td>Out of pocket expd. as % of Pvt. HE</td>
<td>82.5</td>
<td>96.5</td>
<td>72.4</td>
<td>81.9</td>
<td>78.9</td>
<td>86.4</td>
</tr>
<tr>
<td>Out of pocket expd. as % of THE</td>
<td>44.4</td>
<td>64.6</td>
<td>49.2</td>
<td>53.3</td>
<td>37.5</td>
<td>60.2</td>
</tr>
</tbody>
</table>

Source: Global Health Expenditure data Base, World Health Organisation (WHO), 2009

As far as formal sources of financing healthcare (i.e. health insurance) are concerned, the coverage in some form or the other, i.e. whether in public or private sphere, is abysmally low and is only around 3 percent of the total Indian Population in 2004-05\(^1\). A study by Yip and Mahal (2008) shows only about 15 percent of total population in India is covered under any form of health insurance. A recent study by Public Health Foundation of India (2011) showed that approximately 302 million individuals or 25 percent of India’s population was covered by any form of insurance including Central Government Health Scheme (CHGS), Employees State Insurance Scheme (ESIS), government sponsored schemes and Micro Health Insurance (MHI) schemes in 2010. The coverage is still very abysmal compared to some of the south

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\(^1\) Figure is based on author’s calculation using IHDS survey data 2004-05.
Asian countries. For example; 85 percent of the population are covered under PhilHealth, the government-owned health insurer in the Philippines and around 97.5 percent eligible population covered under China’s rural health-insurance scheme\(^2\).

However, the sudden surge in health insurance coverage in recent years particularly after 2006-07 is due to the government intervention both at centre and some state levels. Some of the major schemes are; Rastriya Swasthya Bima Yojana (RSBY, centre initiative), Chief Minister Kalaignar’s Insurance Scheme for Life Saving Treatments (in Tamilnadu), Vajapayee Arogyasri Scheme (in Karnataka) and Rajiv Arogyasri (in Andhra Pradesh) which cover almost 247 million individuals or 82 percent of population covered by any health insurance schemes across the country.

1.2 Statement of the Problem and Research Questions:

After more than sixty years of independence, India could not achieve the desired level of health indicators that could match with international level. There exists a huge disparity in health outcomes across socio economic groups. The disparity can be ascribed to disparity in healthcare utilisation and out-of-pocket financial burden across socio-economic groups. High share of out-of-pocket burden is due to the low share of government expenditure on total health expenditure. However, in this neo-liberal era, increasing other sectoral demands for economic growth is compelling government to reduce its share on developmental sector like health (Panchamukhi, 2000). Consequently, promotion of health insurance has emerged as one of the better financing mechanism towards achieving equitable healthcare of the population. A strong political drive to provide health insurance as a health security measure to the vulnerable sections of the society is also reflected in the government policy documents in planning documents of India.\(^3\)\(^4\) For example, at the central government level, the National Rural Health Mission put forward proposals to support community-based health insurance by subsidizing the premium of the poor. The Eleventh five year plan document under National Urban Health Mission (NUHM) proposes to meet health needs of the urban poor through various ways where provision of health insurance is given importance (Planning

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\(^2\) http://www.economist.com/node/21562210

\(^3\) A report of the working group on health care financing including health insurance for the 11th five year plan (http://planningcommission.nic.in/aboutus/committee/wrkgrp11/wg11_rphfw3.pdf)

\(^4\) Report of the steering committee on health for the 12th five-year plan (http://planningcommission.nic.in/aboutus/committee/strgrp12/str_health0203.pdf)
The present NDA -2014 government is willing to roll out its promised National Health Assurance Mission (NHAM) wherein insurance will play a vital role.

Since 2007-08, it is seen that both government and non-government initiated health insurance schemes have been introduced to provide various formal health security mechanisms in the form of health insurance. Particularly after 2006-07, governments, both at the centre and state levels, have initiated various health insurance schemes like; Rastriya Swasthya Bima Yojana (RSBY, centre initiative), Chief Minister Kalaignar’s Insurance Scheme for Life Saving Treatments (in Tamilnadu), Vajapayee Arogyasri Scheme (in Karnataka) and Rajiv Aarogyasri (in Andhra Pradesh). These schemes are mainly directed to low income and socio-economically backward sections of the society.

The intensification in provision of health insurance is based on the theoretical argument that provision of health insurance leads to timely access to healthcare, circumvents self-care and no care, increases utilisation of healthcare and avoids catastrophic health expenditure irrespective of socio-economic barriers. As a result, it brings efficiency and equity in the health sector. However, the high level expert group (HLEG, 2011) report on “universal health coverage for India” has stated that health insurance as a system has not been able to provide enough financial protection but has rather led to increased vulnerability due to over and unnecessary utilisation of services (the problem of moral hazard), higher share of riskier groups in a pool (presence of adverse selection), provision of selective and incomplete coverage and more preference to private facilities albeit being expensive. The above assertion contradicts and poses doubts on the premise of the role of health insurance on financial protection.

The above-mentioned theoretical arguments are empirical in nature and point towards the following policy-based investigations- (i) why does disparity in healthcare utilisation exist and what are the factors that determine the utilisation behaviour? (ii) Does health insurance status lead to change in healthcare utilisation behaviour? In other words, does insurance status lead to higher probability to use health services, higher probability to choose private over public providers and increase in use of health services? (iii) Does health insured provide financial risk
protection and reduce dependence on informal sources of financing across socio-economic groups?

The above questions have policy relevance in developing countries such as India. While the first two questions address the issues of equity in healthcare utilisation as well as potential role of moral hazard problem, the third question deals with the issue of role of health insurance as a health financing mechanism to improve household welfare.

1.3 Research Gaps and Issues:

Few studies in India have attempted to adopt a holistic perspective on healthcare utilisation behaviour. Most of the studies on healthcare utilisation are specific to maternal and child healthcare. However, aggregate level studies on the factors that determine the utilisation behaviour are deficient in Indian literature.

There exist no uniform results on the relationship between households’ demographic, socio-economic, health related variables and healthcare utilisation behaviour in the empirical literature. Both international as well as Indian studies’ results are mixed because of differences in the consideration of variables and methodology. In this regards a suitable and improved methodological approach is called for.

Most importantly, the provision of health insurance as a health security measure has been given utmost importance to curb health risk of the people in low income settings in recent years (particularly after 2006-07). The main objectives of those schemes are to reduce inequity in healthcare utilisation and health financing by offering protection against catastrophic expenditure and by reducing the dependence on informal sources of financing. However, empirical studies on evaluating the effectiveness of those schemes are few in the Indian context. On the other hand, the impact of health insurance as a financial mechanism on healthcare utilisation and financial risk protection has not been well-examined in India. Moreover, international studies have reported diverse and contrasting results on the impact of health insurance on healthcare utilisation and financial risk protection, where, Health insurance design plays a vital role in providing positive impact on utilisation of healthcare and financial risk protection.
1.4 Objectives:

Considering the above gaps in literature, this study attempts to understand the broad issues of healthcare utilisation behaviour, health expenditure burden and the effectiveness of health insurance on those issues. Therefore, some of the specific researchable objectives are:

(a) To analyse the healthcare utilisation behaviour and its financial implications in India.
(b) To study the factors determining household healthcare utilisation behaviour and the impact of health insurance.
(c) To ascertain the factors determining out-of-pocket financial burden and the impact of health insurance
(d) To examine how effectively government health insurance schemes directed to the households in low income settings provide financial protection.

1.5 Hypotheses:

i. If household and community level factors are related to healthcare utilisation, then utilisation of healthcare will be higher among the households with higher socio-economically status, with more the number of children and elderly persons, with lower the level of health status, higher the level of physical accessibility and quality health services in the community.

ii. If health insurance status affects healthcare utilisation behaviour, then households with insurance will have higher likelihood of utilising healthcare than household not having health insurance other things remaining constant. In other words, households/individuals with insurance status will have higher likelihood to seek healthcare, to utilize more outpatient and inpatient visit, to choose private over public facilities than their counterparts.

iii. If health insurance reduces the burden of health expenditure and provides financial protection, households with health insurance have lesser financial burden and higher financial protection than their counterparts.

iv. Recent government health insurance schemes directed at low income households are able to provide significant financial protection and lessen dependence on informal sources of healthcare financing.
1.6 Sources Of Data and Methodology:

To examine the above objectives, both secondary and primary data have been used. NSS 60th Round data on “Morbidity, Health Care and Condition of the Aged” has been used as secondary data to develop a broad perspective on healthcare utilisation, health expenditure burden and its source of financing. The information about households’ health insurance status, insurance’s impact on healthcare utilisation and reduction in health expenditure have been analysed using Indian Human Development Survey (IHDS, 2004-05). Although the data is dated, this is the only source of secondary data available publicly till date which provides information on individuals/households health insurance status. The survey also provides information on various topics related to health including health expenditure, health insurance, risk factors, and health status.

To identify and assess the factors that determine the impact of health insurance (especially targeted to the low-income settings) on healthcare utilisation and financial protection, a detailed primary survey has been conducted. Since secondary data does not provide information on how recent government-provided schemes impact households’ healthcare utilisation and provide protection against catastrophic expenditure, we had to conduct a detailed primary survey to meet the requirements of data gap.

1.6.1 Study Design:

Odisha state is selected for the primary survey as the state has achieved poor health outcomes over the years. The recent government-initiated RSBY insurance scheme’s main objective is to increase healthcare utilisation, reduce health-related financial burden and lessen dependence on informal sources of financing. So, it would be useful to examine the effectiveness of the scheme on households’ health utilisation behaviour, financial risk protection and level of dependence on informal sources of financing.

The survey is based on multi-stage sampling method where one District is selected in first stage, followed by Blocks/Talluks, villages, and ultimately the sample households with and without RSBY. In the first stage one district has been selected, where government scheme (RSBY) is operating based on various criteria. In the second stage, two blocks from Cuttack district have been selected where the
schemes have relatively higher coverage, one relatively centrally located in the
district i.e. with proximity to district headquarters and the other one away from the
headquarter to categorize them as urban and rural respectively. In the next stage,
two villages from each block have been selected again depending upon the coverage
of RSBY. In the last stage, equal numbers of both insured and uninsured households
have been selected from each village on the basis of simple random sampling. The
total sample size (households) is around 190. For the selection of insured households
under RSBY scheme, the list of beneficiaries has been obtained from the State Labour
Directorate, state government of Odisha. A detailed description of sampling design
has been provided in Chapter-6.

1.6.2 Household Survey:
The heads of households or the most senior member of the household from
the selected households has been interviewed as they are the decision makers in the
HHs. The purpose of the study was explained to the respondents. Data on the
demographic and socioeconomic characteristics of HHs, their health status, cost of
treatment, sources of financing healthcare expenditure (various coping mechanisms),
 sources of receiving healthcare, perception on quality of healthcare service received,
knowledge about health insurance or any form of insurance, insurance status and
some information on the community level characteristics such as availability and
accessibility of health services have been collected through a structured interview
schedule along with some in-depth interviews for studying perceptions of the
beneficiaries of health insurance.

1.6.3 Techniques Used:
To examine the above objectives and hypotheses, bi-variate and multivariate
analysis techniques have been used. Descriptive statistics such as; bi-variate tables,
mean, median, percentage etc have been used. The impact of various independent
variables on healthcare utilisation behaviour, incidence of catastrophic expenditure,
dependence on informal sources of financing and expenditure, has been analysed by
applying multivariate such as qualitative dependent variable techniques. Various
regression techniques like logit, probit, Multinomial Logit/Probit, Two-part Model,
and OLS regression models are used depending upon the nature of dependent
variables and the hypothesised nature of the relationship between dependent and
independent variables.
1.7 Organisation of The Thesis:

The thesis is organized in seven chapters. The first chapter is an introductory chapter that presents the background, relevance, research problem, objectives, hypothesis, and sources of data and methodology of the study. The second chapter deals with relevant theoretical and empirical literature review. The third chapter discusses health financing mechanism and the role of health insurance in India. In the fourth chapter, the impact of health insurance on healthcare utilisation has been investigated along with various socio-economic variables. The fifth chapter uses available secondary data to examine the role of health insurance in providing financial risk protection. The role of RSBY, a central-state sponsored health insurance scheme, in providing financial risk protection to the targeted population (BPL families) has been examined in the sixth chapter. The last chapter of the thesis summarises the findings as a whole and discusses policy implications.