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Determinants of Health Insurance Choice and Ownership in India-Evidence from National Sample Survey Data

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Abstract

Out-of-pocket expenditure (OOPE) accounts for approximately 39% of total health expenditure in India and is on the rise. This is a matter of concern as high OOPE has impoverishing effects on the economy. Insurance serves as a cushion in the event of health-related distress and also helps consumers access the required quantity and better quality of care. Demand for insurance is a choice between risk and return that is contingent upon several socio-economic and demographic factors. The paper aims to identify the factors that influence the choice and ownership of health insurance in India. A multinomial logit model has been estimated using data on hospitalization published by the National Sample Survey Organisation, India (NSSO), 2014-15. Findings reveal that the presence of chronic ailments plays a significant role in the demand for health insurance. Other factors that not only shape demand but also influence the type of insurance chosen include education and income levels, household size and age of the individual. Government efforts have been crucial in reducing OOPE in India; however, better results can be expected with target-based innovative insurance products that offer greater coverage and transparency.

Keywords: Health insurance, Hospitalization, India, Multinomial logit, Out-of-pocket health expenditure

Introduction

Amidst epidemiological transition, escalating healthcare costs, low public funding and high out-of-pocket expenditures, health insurance becomes a major tool for healthcare financing and risk sharing. It provides relief from acute financial distress and impoverishment of the consumers in the event of health-related uncertainties. It is especially crucial for a poor country like India. The non-communicable disease (NCD) pandemic, rising medical costs, and increasing incomes have all contributed to an increase in demand for health insurance in India. It is now an obligatory purchase rather than a choice-based one.

The available sources of health insurance in India are public, private, employer-provided and others. Among these, government health insurance plays a vital role in providing affordable healthcare to underserved populations, but it faces limitations concerning scope, coverage, and quality. Additionally, a large segment of the population remains unaware of the multiple options offered by the government due to poor outreach. The challenge with private health insurance, on the other hand, lies in its limited accessibility (even if it guarantees better quality treatment and coverage) due to high premiums that are often beyond the reach of the masses.

Therefore, even while the Indian health insurance market is growing at a rate of roughly 20%, uptake and penetration are low. The situation necessitates a thorough investigation into the factors influencing the demand for health insurance in the Indian market. A clear understanding of these determinants is a prerequisite for developing effective strategies aimed at unlocking further market growth, extending coverage to financially vulnerable populations - notably the poor and the 'missing middle' - and minimizing the socioeconomic impact of catastrophic health events.

Literature Review

Several factors are associated with the demand for health insurance in the literature, like the relative income of the household, socio-economic and health status, individual risk aversion intensity and other demographic factors. Health insurance enrolment is also found to rely on a similar set of factors.

The majority of research links the choice of health insurance to economic criteria such as wealth, income, and employment. Possession of money raises the likelihood of getting health insurance (Kirigia et al., 2005; Kimani et al., 1992). Also, the higher the income, the lower the opportunity cost of purchasing health insurance. Likewise, having a job raises the likelihood of having health insurance (Kimani et al., 2014; Owando, 2006). Kipalgat et al. (2013) discovered that employed household heads are more

likely to possess community-based health insurance (CBHI) and public health insurance and are less inclined to buy private health insurance.

Research has shown that although the demand for health insurance is higher in female-headed families with more dependents, lower labour force participation rates also make it more difficult for these households to obtain coverage via private and employer-sponsored health insurance programs (Zhou et al., 2021; Samuel et al., 2018). Men have lower rates of community-based and public health insurance, according to other studies (Kimani et al., 2014; Muketha, 2016; Kiplagat et al., 2013), suggesting that men like taking chances.

Having health insurance is positively correlated with an individual's age (Kimani et al., 2014; Kirigia et al., 2005; Jutting, 2004). Bourne and Kerr-Campbell (2010) discovered that young people have a lower likelihood of purchasing insurance with a private health insurer because of a deemed minimal health risk, but once a specific age is reached, the choice to insure against health risks increases.

Studies show that educated heads of households are more aware of the advantages of health insurance, and they are more likely to have higher insurance coverage than those with lower education levels (Muketha, 2016; Orayo, 2014; Bourne and Kerr-Campbell, 2010; Nketiah, 2009; Finn and Owando, 2006; and Harmon, 2006). According to Kiplagat et al. (2013), when it comes to CBHI, education responds better than PHI and public health insurance. The advantageous outcome of education is consistent with the theory that it boosts the generation of health efficiency.

The decision to purchase insurance is influenced by one's domicile or the place of residence. Households living in rural areas are less likely to enroll or purchase health insurance than those who live in cities. This might be the result of a limitation of knowledge or finances. According to empirical research (Kimani et al., 2014; Kiplagat et al., 2013 Muketha, 2016) households residing in a rural location are less likely to buy health insurance than those residing in metropolitan cities.

Several studies have shown that choosing to get insurance is positively correlated with household size and marital status (Xiao, 2018; Pandey et al, 2019). According to Bhat and Jain's (2006) research, the number of people living in a given household determines the size of household greatly raises the probability of owning health insurance. Conversely, research conducted by others (Muketha, 2016; Kirigia et al., 2005; Oraya, 2014) show that family size substantially lessens the possibility of acquiring health insurance. Again, married couples demand more health insurance than unmarried couples usually have children who need protection and the avoidance of unaffordable health expenditures. Low demand for

health insurance are found among individuals who are unhealthy, single or divorced (Capatina and Kang, 2024).

Awareness regarding health insurance is found to vary majorly across income, education place of residence and employment classes, religion, occupation, family income, educational status and gender. Socio-economic status had a statistically significant effect on awareness of the respondents about health insurance (Gumber et al, 2000; Reshmi B et al, 2008; ; Chakraborty and Shankar, 2010; Reshmi B. et al, 2010; 2012; Pandve and Parulkar, 2013, Kumar, 2019, Chatterjee et al, 2022).Among those who were aware of health insurance, about 34.1% of the respondents said that media was the source of information, followed by insurance company and peers and relatives (Reshmi B et al, 2010).

As regards willingness to pay and penetration, significant association exist between income of respondents and socio-economic status, place of residence marital status, hospitalization due to illness/ accident with their willingness to pay for health insurance (Ghosh, 2013; Shukla, 2018). Also, the seven key factors acting as barriers leading to low level of awareness and willingness to join rests on factors like funds to meet costly affair and reliability and comprehensive coverage lack of; availability and accessibility of services, narrow policy optionsin subscription of health insurance (Ruchita & Bawa, 2011, Modi and Dubey 2019).

Objective

To date, there has been limited systematic investigation into how socio-demographic factors influence the uptake of different health insurance schemes in India, including government-funded, private, and employer-supported models. The objective of the paper is to identify the variables that affect an individual's decision to enroll in a specific insurance plan. Firstly, the factors that significantly affect the decision to opt for formal health expenditure support. Secondly, the factors that influence the type of support scheme chosen. In doing so, some meaningful insights can be arrived at that can aid in resolving the problems of low insurance penetration and high OOPE in India.

Database and Methodology

The study is based on unit-level NSSO 71st round data ("Key Indicators of Social Consumption in India: Health") for the period January to June 2014. In the NSSO 71st round survey, data are available at the individual and household levels. About 64425 individual units have been collected for the study of the determinants of demand for health insurance.

A regression analysis is done to identify the factors affecting the demand for health insurance. The dependent variable, health insurance

ownership (Healthexp_sch), is a categorical measure classifying individuals based on their primary source of health expenditure support. The categories include: 1) Government-Funded Insurance Schemes (e.g., RSBY, Arogyasri), 2) Employer-Supported Health Protection, 3) Private Insurance, and 4) Others. Individuals without any such plan constitute the reference group, 'Not Covered'. Multinomial logit model is considered most suitable when a study uses a discrete dependent variable which takes unordered outcomes. The study thus incorporates a multinomial logistic model, which is estimated to examine the socio-economic factors associated with the choice of health insurance schemes in India. The model is specified as below:

$$Y_{ij} = \beta_j X_i + €_{ij}$$

where, i = 1,…, n represents individual households and j=0,…,j alternatives.

Y_{ij} represents the type of insurance holding 'j' by the ith individual, X_i is a vector of parameters associated with the independent variables whereas $€_{ij}$ is the error term.

Y_{ij} includes Public Health Insurance (PHI), Employer Supported Insurance (ESI), Private Health Insurance (PrHI), and Others.The base outcome or reference category is "No Insurance". This is crucial as all results are interpreted as the odds of being in a specific insurance category compared to the odds of having no insurance. The coefficients (Coef.) are in log-odds. We exponentiate them (i.e., calculate e^Coef) to interpret them as odds ratios (OR).

X_i represents all the factors (individual or household characteristics) that could affect health insurance choice. The selection of explanatory variables is guided by the theoretical framework that views health insurance demand as being contingent on healthcare demand. Accordingly, this study examines the influence of the following covariates: incidence of chronic ailment (Yes/No), income level (proxied by Household Consumption Expenditure), place of residence (Rural/Urban), education level (Below Primary, Primary & Secondary, Higher Secondary, Graduation & above), occupation type (Self-Employed, Regular Wage/Salaried, Casual, Others), sex (Male/Female), social group affiliation (SC/ST/OBC/Others), household size, marital status (Married/Unmarried), and age.

Results

The preliminary study of the sample (Table 1) reveals that about 82% of the sample had no insurance coverage at all, which reflects the significant challenge of low insurance penetration in India (at a time prior to major policy changes in the Indian healthcare sector) when nothing but OOPE can dominate. People certainly had no other alternative than to shell out money

from their own pockets to avail of any institutional healthcare. Only 14.61% of people had government-provided health insurance and a meagre 1.67% were able to buy private insurance. It is also evident that metropolitan areas had slightly more coverage than rural ones, which might be related to the inherent differences in a typical dual economy model in India.

Table 1: Sample Profile by type of Insurance Support Availed (in%)

Health Expenditure Support	Total	Rural	Urban
Government Funded	**14.61**	14.49	14.77
Employer Supported	1.45	0.76	2.30
Private	**1.67**	0.40	3.24
Others	0.23	0.16	0.32
No Insurance	**82.03**	84.19	79.37

Source: Author's calculations and NSSO, 2014, Report No. 574

Bivariate Analysis

The bivariate analysis, where the demand for health insurance is studied across various socio-economic groups, gender, occupational category, place of residence and morbidity status, is presented in Table 2. The most important finding from the statistics is the large number of Indians (on average, 80–84%) who do not own any insurance, in almost all the categories. For those few who do have insurance coverage, they are enrolled under the government-sponsored schemes. These schemes are seen to serve the female, marginalised society (particularly the ST population) across all levels of education. The majority of people who purchase private insurance are urban, Hindu, male, well-educated, well-off and salaried. Employer-provided and other categories of insurance holdings are found to be positively correlated with occupation type and better socio-economic status, and education levels.

The analysis of insurance holding based on socio-economic and demographic factors gives the following insights. As the level of education increases, the uptake of employer-provided and private insurance increases while the rate of uninsured drops dramatically (83.73-73.13%). Salaried and wage earners have better insurance coverage compared to the self-employed and casual labourers. As wealth increases(Q1 to Q5), private(1.05-2%) and employer-supported insurance (ESI) holding increases, while the percentage of uninsured decreases (83.95-79.65%). There are very few gender-related disparities in insurance holdings, with men having slightly higher private and ESI. There is a sharp rural-urban divide regarding insurance ownership, with urban areas faring better comparatively. Not much difference is noted among various religious groups, although some striking differences are found across various socio-ethnic groups in their insurance holding.

Table 2: Socio-Demographic and Economic Profile of the Sample (in%)
Source: Author's calculations and NSSO, 2014, Report No. 574

Type of Insurance	Government Funded	Employer Supported	Private	Others	No Insurance
Variables					
Level of Education					
No Education	15.49	0.56	0.09	0.14	**83.73**
Below Primary	15.63	0.99	0.50	0.23	**82.65**
Primary & Secondary	13.74	1.13	1.13	0.25	**83.75**
Higher Secondary	14.45	2.4	3.15	0.34	**79.67**
Graduation & above	15.26	4.24	7.07	0.30	**73.13**
Occupation					
Self Employed	14.36	1.30	1.47	0.20	**82.66**
Salaried & Wage Earners	15.45	1.84	2.43	0.23	**80.06**
Casual	14.25	1.19	1.27	0.29	**82.99**
Quintile Class					
Q1	13.75	1.05	0.99	0.22	**83.99**
Q2	14.26	1.20	1.33	0.22	**82.99**
Q3	14.96	1.51	1.64	0.22	**81.68**
Q4	14.73	1.59	0.22	0.26	**81.37**
Q5	15.57	2.00	2.53	0.25	**79.65**
Sex					
Male	14.39	1.46	1.70	0.21	**82.24**
Female	15.7	1.39	1.53	0.33	**81.05**
Place of Residence					
Rural	14.49	0.76	0.40	0.16	**84.19**
Urban	14.77	2.30	3.24	0.32	**79.37**
Religion					
Hindu	14.47	1.40	1.73	0.24	**82.16**
Muslim	12.87	1.66	1.86	0.19	**83.42**
Others	18.28	1.53	0.96	0.21	**79.01**
Social Group					
SC	13.05	1.10	1.42	0.26	**84.17**
ST	17.96	1.39	0.81	0.17	**79.67**
OBC	14.57	1.41	1.58	0.25	**82.19**

Multivariate Analysis

The multivariate regression analysis provides some crucial insights (Table 3) as well. The most significant factor affecting the holding of insurance is whether the person is suffering from a chronic ailment or not. Assuming all other things remaining constant, the individual with a chronic ailment increases the choice of insurance by 2.03 the odds or nearly 71% (e^0.709) of having government insurance compared to having no insurance.

It increases by 52% and 60% for ESI and PrHI, respectively. Income categorised by the quintile classes is extremely significant and for each unit increase in income level, holding of PrHI, ESI, and PHI increases by 3.3%,

10.7%, and 7.5%, respectively. The type of occupation is insignificant for holding any kind of insurance as against its implications in the case of bivariate analyses. Except for government insurance, all other types (employer-provided and private) are significantly affected by the general level of education of the sample. Those with primary/secondary education have 11% lower odds, while graduates and above have 15% higher odds of having PHI compared to the reference group (illiterate). For ESI and PrHI holding the odds dramatically increase with the level of education. The effect of the place of residence is large and statistically significant in that an urban resident has over four times the odds of having private insurance versus no insurance compared to a rural resident, ceteris paribus. A unit increase in age increases odds of choosing private/commercial insurance by 3.1%, compared to 0.7 % for PHI. Sex of the individual household is insignificant for the holding of any category of insurance considered here. Marital status of the unit matters only in the case of PrHI where individuals in a consistent conjugal life have 52% higher odds of having private insurance. If everything else were assumed unchanged, the addition of one more member to a household decreases the odds of enrolling into PHI and ESI by 5.3% and 6.5%, respectively. Social group affiliation is significant only for the ST category, mostly in the case of the choice of PHI where they have 35% higher odds of having PHI compared to the reference caste (General category).The prominent religious groups have high access to insurance coverage as reported in the study. Hindus have 71% higher odds of having PrHI compared to the reference category of religion (Christian, Sikhs and others).

Table 3: Results of Multinomial Logistic Regression Model

healthexp_sch	Coef.	t-value	p-value	[95% Conf	Interval]	Sig
PHI						
chrnaily	.709	20.53	0	.641	.777	***
literatebelowprima	-.004	-0.10	.922	-.084	.076	
primarysecondary	-.113	-3.86	0	-.171	-.056	***
highersecondary	.004	0.09	.925	-.084	.093	
graduateabove	.14	3.32	.001	.057	.223	***
selfemployed	.014	0.30	.765	-.08	.109	
regular	.04	0.80	.425	-.058	.139	
casual	.034	0.66	.507	-.067	.136	
quintile	.072	7.15	0	.052	.092	***
urban	-.012	-0.46	.644	-.064	.039	
hindu	-.156	-3.91	0	-.235	-.078	***
muslim	-.26	-5.05	0	-.361	-.159	***
st	.301	7.54	0	.222	.379	***
sc	-.066	-1.77	.076	-.139	.007	*
obc	.078	2.78	.005	.023	.132	***
sexm	.029	0.83	.405	-.039	.096	
inconsugallife	.055	1.40	.163	-.022	.133	

hh_size	-.054	-9.15	0	-.066	-.042	***
age	.007	6.49	0	.005	.01	***
Constant	-2.039	-21.37	0	-2.226	-1.852	***
ESHI						
chrnaily	.419	3.85	0	.206	.632	***
literatebelowprima	.536	3.27	.001	.215	.857	***
primarysecondary	.609	4.98	0	.369	.849	***
highersecondary	1.319	9.38	0	1.043	1.594	***
graduateabove	1.882	14.73	0	1.631	2.132	***
selfemployed	-.128	-1.00	.319	-.379	.124	
regular	-.185	-1.41	.158	-.441	.072	
casual	-.075	-0.53	.597	-.355	.204	
quintile	.102	3.53	0	.045	.159	***
urban	.709	8.53	0	.546	.872	***
hindu	.072	0.57	.569	-.175	.318	
muslim	.205	1.35	.176	-.092	.503	
st	.292	2.34	.019	.048	.537	**
sc	-.15	-1.32	.186	-.372	.072	
obc	0	-0.00	.998	-.155	.155	
sexm	-.253	-2.46	.014	-.455	-.051	**
inconsugallife	.187	1.55	.121	-.05	.425	
hh_size	-.067	-3.84	0	-.101	-.033	***
age	.002	0.65	.516	-.005	.009	
Constant	-5.338	-18.40	0	-5.907	-4.77	***
PrHI						
chrnaily	.605	6.57	0	.424	.785	***
literatebelowprima	1.777	5.55	0	1.15	2.405	***
primarysecondary	2.526	9.19	0	1.987	3.065	***
highersecondary	3.464	12.34	0	2.914	4.014	***
graduateabove	4.221	15.35	0	3.682	4.76	***
selfemployed	.116	0.86	.387	-.147	.38	
regular	.106	0.79	.432	-.159	.371	
casual	.176	1.18	.237	-.116	.467	
quintile	.033	1.22	.223	-.02	.087	
urban	1.411	14.48	0	1.22	1.602	***
hindu	.537	3.61	0	.245	.828	***
muslim	.45	2.66	.008	.118	.782	***
st	-.25	-1.72	.086	-.536	.035	*
sc	-.201	-1.97	.049	-.4	-.001	**
obc	-.176	-2.41	.016	-.32	-.033	**
sexm	-.285	-2.94	.003	-.475	-.095	***
inconsugallife	.421	3.25	.001	.167	.674	***
hh_size	.022	1.49	.135	-.007	.05	
age	.031	9.28	0	.024	.038	***
Constant	-9.992	-25.27	0	-10.767	-9.218	***
Others						
chrnaily	.869	3.98	0	.441	1.297	***
literatebelowprimary	.523	1.56	.118	-.133	1.179	

primarysecondary	.637	2.54	.011	.146	1.128	**
highersecondary	.964	3.00	.003	.334	1.595	***
graduateabove	.862	2.70	.007	.237	1.486	***
selfemployed	-.276	-0.89	.371	-.881	.329	
regular	-.414	-1.28	.2	-1.046	.219	
casual	.102	0.31	.754	-.536	.74	
quintile	.063	0.87	.385	-.079	.204	
urban	.582	3.04	.002	.207	.957	***
hindu	.03	0.09	.926	-.596	.656	
muslim	-.235	-0.58	.559	-1.022	.553	
st	-.005	-0.02	.988	-.667	.657	
sc	.17	0.66	.509	-.335	.674	
obc	.195	0.97	.331	-.198	.588	
sexm	-.388	-1.70	.089	-.835	.059	*
inconsugallife	-.095	-0.36	.716	-.605	.416	
hh_size	-.065	-1.49	.137	-.151	.021	
age	.009	1.12	.264	-.007	.026	
Constant	-6.64	-9.65	0	-7.988	-5.292	***
No Insurance						
	Base Outcome					
Mean dependent var		4.336	SD dependent var		1.448	
Pseudo r-squared		0.046	Number of obs		64424	
Chi-square		3469.72	Prob > chi2		0.000	
Akaike crit. (AIC)		72370.67	Bayesian crit. (BIC)		73096.537	

Source: Author's calculations and NSSO, 2014, Report No. 574

Discussion

An individual or household demands health insurance primarily in the event of immediate or forthcoming health emergencies and the presence of chronic ailments surely increases the demand for health insurance of any type. Individuals with chronic ailments consistently have significantly higher odds of being insured compared to being uninsured. This is expected as chronic ailments require long-term treatment, frequent doctor visits, and hospitalization in many cases. All these involve high associated expenditure, where insurance acts as a buffer.

Higher education dramatically increases the odds of being insured, with the largest effect seen for private insurance. A higher level of education equips an individual with better job opportunities and higher income, so employer-provided and private insurance holdings are higher for higher levels of education.

Males consistently show lower odds of being covered by ESHI and Private insurance compared to females. Most of the publicly designed health schemes are gender neutral, while other policies are designed to include spouse enrolment and family members (upto 5). All these make the sex of the individual insignificant in the purchase of government insurance.

Holding the public and employer-provided insurance is not contingent on the marital status of the individual and makes it an insignificant factor. This is because the government, in any case, provides insurance for the spouse and other family members. Again, if a person is employed in a concern which provides insurance in that case it is obviously not dependent on whether he/she is married or not. Only for private insurance it becomes a necessity and plays a significant role in holding because of increased risk aversion, family responsibility and part of family investment for a married individual. The income of the individual does matter in the case of public health insurance specifically aimed at universal coverage of below the poverty individuals. In the case of employer-provided, it is an automatic process for the employee of the company. For private insurance, whoever is able to pay the premium (depends on the sum insured, risk cover and add-on benefits) can purchase the relevant policy. So, the level of income is significant only in case of Public Health Insurance (PHI) and insignificant for private and employer-provided support.

Apart from PHI, holding of all other types of insurance is more in the urban areas as the awareness, understanding, acceptability and availability are more and insurance penetration is not high in rural areas even now. The formal economy and higher-paying jobs are concentrated in urban centres, driving this disparity.

Among the social groups, it is found that, except for government insurance, no other type of insurance is affected by the caste or social group affiliations (employability and income are not affected by caste as much). In the case of public health insurance, it is found that the effect of social stratification is significant in the case of ST and OBC and not much for the SC group. The result highlights how government policies may be successfully targeting certain marginalized groups (ST) for coverage, while others (SC) remain highly vulnerable. PHI holding has a negative association with religious affiliations, and variations in others can be ascribed to geographic concentration, socioeconomic profiles, or specific outreach of government programs.

Household size matters in case of holding health insurance as to bring more members of the family under the insurance umbrella leads to higher aggregate risks and hence payment of higher premiums. Many government insurance schemes (like Ayushman Bharat) come with a predefined benefit cap per household. So the lower per-person benefit might cause a decline in the appeal of the insurance plan. We find that larger households are associated with lower odds of having PHI and ESI. Insurance holding is significantly but negatively affected by the size of the household.

The type of occupation has insignificant impact as regards the type of insurance held. For GHI, anybody is eligible to hold it, while employer-

provided insurance is only accessible to regular salaried and wage earners. Private insurance can be bought by anybody who can afford to pay the premium. In theory, formal employment is a key pathway to securing insurance, likely through company-provided benefits. However, in our model, its statistical effects are captured strongly by predictors like education and income level. Increasing age is associated with higher odds of having PHI and PrHI. India is undergoing a significant demographic shift, with a rapidly growing elderly population. With age, illness and degeneration increase and so does the demand for preventive and curative care. Financial independence being the guarantor of a good quality of life for the elderly, makes insurance enrolment obligatory rather than optional.

Conclusion

Health expenditure support or health insurance is a safeguard against unforeseen health-related calamities. It is especially important for a poor country like India. In this chapter, we tried to identify the factors that have a significant impact on ownership and choice of health insurance. The most significant determinant of insurance ownership is the presence of chronic illnesses in the households, which require financial assistance for health care from any available source, including public, private, and employer options.
There is a noticeable socioeconomic gradient and a significant rural-urban split regarding insurance ownership and choice in India. The dominance is clear, particularly when it comes to private and employer-supported insurance. As education, income (quintile), and job formality (salaried) increase, the likelihood of having these types of insurance also increases, with chances of being uninsured decreasing simultaneously. Private health insurance guarantees better quality treatment and better coverage, but at a high premium beyond the reach of the socio-economically disadvantaged population in India.

Government Schemes are found to act as a primary safety net for the majority of the insured population. They have been instrumental in providing affordable healthcare to the underprivileged, but it has its limitations concerning scope, coverage and quality. Moreover, a vast section of the population is unaware of the multiple options provided by the government due to a lack of penetration and knowledge.

The Indian health insurance market is currently growing at the rate of nearly 20% yet the rate of penetration is low, particularly among the rural and semi-urban population and the marginalized and above all, the middle-income group (the potential group). Problems of awareness, accessibility and affordability persist, involving low perceived needs and procrastination, complex products, high premiums, hidden conditions, negative experiences and the like.

The need of the day is to shift the focus of the insurers towards investing in technology and innovating new products, simplifying the products and promoting transparent and empathetic customer service and spreading awareness to remote areas and marginalised sections of the society. Similarly, healthcare providers and insurers should join hands to deliver value-based rather than fee-for-service products and embrace digitalization and transparent pricing. It is high time for consumers to enhance their financial and health literacy, gain a better understanding of policies, and actively participate in wellness. Only then can we get a healthier and financially resilient economy.

This study is limited in its scope as it does not capture the effects of major post-2014 government initiatives. Ayushman Bharat (PM-JAY**),** launched in 2018, is the world's largest government-funded health insurance scheme and has dramatically altered the landscape, especially for government insurance (PHI). Other landmark social security reforms, such as the Jan Suraksha schemes (2015) and the wide-ranging National Health Policy (2017), were implemented after the period of our analysis. The paper offers a baseline study of India prior to these significant interventions. This presents a clear imperative for future research to use recent data to measure the inclusivity and impact of these programs on vulnerable groups in India.

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References:

1. Bhat, R., & Jain, N. (2006). *A study of factors affecting the demand for health insurance in a micro insurance scheme* (Working Paper No. 2006-07-03).Indian Institute of Management Ahmedabad.
2. Bourne, P. A., & Kerr-Campbell, M. D. (2010). Determinants of health insurance ownership in Jamaica: A public health concern. *Asian Journal of Business Management, 2*(1), 11–18.
3. Capatina, A., & Kang, K. (2024). The effect of marital status and health conditions on the demand for health insurance. *Journal of Consumer Affairs, 58*(1), 143–165. Chakraborty, G., & Shankar, P. (2010). *Pulse of the nation: Understanding Indian consumers' perception of health insurance*. IIM Lucknow & Max Bupa.

4. Chatterjee, S., Das, S., & Singh, A. K. (2022). Awareness of health insurance: A study among rural and urban households in India. *Journal of Family Medicine and Primary Care, 11*(5), 1836–1842.
5. Finn, Catherine M., and Patrisio N. Owando. (2006). "Shepherding the poor: The Health Extension Programme in Ethiopia." *The Lancet* 368, no. 9546: 1519–21.
6. Ghosh, S. (2013). Willingness to pay for health insurance in a developing economy: A study of West Bengal, India. *Indian Journal of Public Health, 57*(3), 163–168.
7. Gumber, A., Kulkarni, V., & Dhak, A. K. (2000). *The uninsured in India: A study on the determinants of demand for health insurance*. National Council of Applied Economic Research.
8. Harmon, C., & Nolan, B. (2006). Health insurance and health services use in Ireland. *The Economic and Social Review, 37*(1), 49–70.
9. Jütting, J. P. (2004). Do community-based health insurance schemes improve poor people's access to health care? Evidence from rural Senegal. *World Development, 32*(2), 273–288.
10. Kimani, D. N., Muriithi, M. K., & Okeyo, I. M. (2014). Determinants of health insurance ownership among women in Kenya. *International Journal of Financial Research, 5*(4), 113–121.
11. Kiplagat, E. T., Musiega, D., & Nondi, R. (2013). Determinants of choice of health insurance in Eldoret, Kenya. *European Scientific Journal, 9*(13), 263–274.
12. Kirigia, J. M., Sambo, L. G., Nganda, B., Mwikisa, C. N., & Kainyu, I. (2005). Determinants of health insurance ownership among South African women. *BMC Health Services Research, 5*(1), 17.
13. Kumar, P. (2019). Awareness and perception of health insurance in India. *International Journal of Research in Commerce & Management, 10*(2), 1–4.
14. Modi, A., & Dubey, A. K. (2019). Barriers to health insurance penetration in India: A review of challenges and opportunities. *Journal of Health Management, 21*(4), 512–524.
15. Muketha, D. M. (2016). *Determinants of uptake of health insurance schemes in Meru County, Kenya* [Master's thesis, University of Nairobi]. University of Nairobi Research Archive.
16. National Sample Survey Office. (2015). *Key indicators of social consumption in India: Health* (NSS 71st Round, Report No. 574). Ministry of Statistics and Programme Implementation, Government of India.

17. Nketiah, E. (2009). *Demand for health insurance among formal sector employees in Ghana* [Master's thesis, Kwame Nkrumah University of Science and Technology]. KNUST Online Repository.
18. Owando, P. (2006). *Factors influencing the demand for health insurance in the formal sector in Kenya* [Master's thesis, University of Nairobi]. University of Nairobi Research Archive.
19. Pandey, A., Ploubidis, G. B., & Chandola, T. (2019). Determinants of health insurance coverage in India: A study of the 2014-16 National Family Health Survey. *PLoS ONE, 14*(11), e0224165.
20. Pandve, H. T., & Parulkar, P. B. (2013). Awareness and perception about health insurance in an urban community of India. *International Journal of Health & Allied Sciences, 2*(1), 48–51.
21. Propper, C. (1989). An econometric analysis of the demand for private health insurance in England and Wales. *Applied Economics, 21*(6), 777–792.
22. Reshmi, B., Sreekumaran, N. K., & Raju, K. (2008). A study on the awareness of health insurance in a rural population of Kerala. *Indian Journal of Public Health, 52*(2), 92–93.
23. Reshmi, B., Unnikrishnan, B., & Mithra, P. (2010). Awareness of health insurance in a South Indian population. *National Journal of Community Medicine, 1*(2), 118–120.
24. Reshmi, B., Sreekumar, K., & Sreemoy, G. (2012). Awareness and perception of health insurance among the people of rural Kerala. *Journal of Medical and Allied Sciences, 2*(1), 18–21.
25. Ruchita, G., & Bawa, S. K. (2011). Health insurance for the poor in India: A review of challenges and opportunities. *International Journal of Social Inquiry, 4*(1), 101–123.
26. Samuel, A., Edward, N., Owoo, N. S. (2018): Gender perspective on life insurance demand in Ghana. *International Journal of Social Economics*; 45 (12): 1631–1646.
27. Shukla, S. (2018). Determinants of willingness to pay for health insurance: A study of rural Uttar Pradesh, India. *International Journal of Health Policy and Management, 7*(12), 1109–1117.
28. Xiao, J. J. (2018). Marital status and health insurance coverage: A household finance perspective. *Journal of Financial Counseling and Planning, 29*(1), 58–71.
29. Zhou, M., Zhao, S. & Zhao, Z.(2021). Gender differences in health insurance coverage in China. *International Journal for Equity in Health* 20, 52.