

IMPACT OF SELECTED FACTORS ON POLICYHOLDER'S CHOICE OF HEALTH INSURERS

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Abstract

In this paper it was aimed to present a comparative analysis of the impact of dominant factors on the policyholders' choice Insurers between Public and Private health insurers, from the data collected through the structured questionnaire, administered to elicit the policyholders' choice of health insurers. It was also proposed to evaluate the dominating factors influencing choice of Health Insurance Company. The factors considered for comparative analysis are 1. Socio-Economic factors (Age, Marital Status, Gender, Income and occupation.) .2. Personal factors (Awareness, Security). 3. Marketing factors (Product features, Price levels, and Distribution). It was analysed using Logistic regression. It was found that Age, High income group, Price and Place have positive relationship. It was observed that the variables that had insignificant relationship were gender, marital status, age, high income, awareness, security, product, price, and distribution on choice of health insurance company.

Key words: Health insurance, Socio-Economic factors, Marketing factors.

Introduction

Health insurance in India is still at a very nascent stage. However, the government is also trying to promote health insurance through various social schemes to make quality healthcare affordable and accessible. Hence, the government's spending on health has also been significant over the recent years. In the year 2018, the government spending on healthcare sector was 1.2% of GDP. The new health policy set a goal to increase it to 2.5% by 2025, which in turn could reduce out of pocket spending of the general public from 70% to 63%.

The new scheme named as the Ayushman Bharat Programme and The National Health Protection Scheme launched in 2018, is a positive initiative by the government to make healthcare accessible to the common people in the country. This Health insurance Scheme aimed to cover 10 crore families with a coverage of Rs 5 lakh per family. It targets to cover approximately 50 crore members. It had a fund allocation in previous financial year (2017) to the tune of INR. 47353 crores and in the current financial year (2018), the funds allocated were INR. 52,800 crores: an increase by 11.5%. It is a leading indicator for development of the health care sector and health insurance sector in India. Since inception, under the scheme, about 12.6 crores health cards have been issued, with 1.32 crores hospital admissions and 23 thousands hospitals empanelment¹. This is a record achievement in terms of persons covered and assured protection.

Insurance growth is measured globally in terms of density and penetration. Density is measured as the ratio of premium to the total population. Non-life insurance density during 2007-08 was 6.2 and 2018-19 was 19, the cumulative growth rate is 9.78%. On the other hand Health insurance density during 2007-08 was 1.09 and 2018-19 was 3.8152, the cumulative growth rate is 11%. During the Financial Year (FY) 2018-19, General & Health Insurance Companies collected 44873 crore as Health Insurance Premium registering a growth of 21.2% over the previous FY 2017-18. Health insurance premium continues to grow over 20% year on year during the past four financial years². The density of non-life insurance further increased to 19 \$ in 2018 with health insurance registering an increase to 3.8%. *Clearly Health Insurance business performance is better than the Non-Life business over the years.*

Insurance penetration is measured as the ratio of premium (in USD) to GDP (in USD). Non-life insurance penetration during 2007-08 was 0.6 and 2018-19 was 0.97, the cumulative growth rate is 4.08% on other hand Health insurance penetration during 2007-08 was 0.10554 and 2018-19 was 0.236, the cumulative growth rate is 6.99%. In 2018, the total non-life insurance registered a further growth up to 0.97 with health insurance experiencing a corresponding increase to 0.23. Thus, Health insurance business is outperforming the Non-Life business.

¹ <https://pmjay.gov.in>.

² IRDAI Annual Report 2018-19.

Review of Literature

Most of the research studies have identified the influence of the following factors on the health insurance purchase decision:

- **Gender** of respondents plays a vital role in selection of health insurance purchase since it effects the expected medical consumption. Sindelar (1982) observed that most of the higher demand for medical services by women may be explained by increased need during the reproductive years.
- **Age of respondents** has shown a significant influence on choice of purchasing health insurance policy. The age has positive and significant impact on the health insurance cover as confirmed by Ramesh Bhat and Nishanth Jain (2006), Yellaiah and RamaKrishna (2012). Senthil Kumar. a et.al (2014) have observed that the age profile analysis indicated that the younger age people are not interested to take medical insurances and old aged people are interested in taking health insurance policy. Due to increase in health care expenditure there is higher probability of purchasing health insurance. The age of the head of the family is an important factor in influencing the purchase decision of a health insurance policy.
- **Marital Status category of Respondents** has shown a significant influence on choice of purchasing health insurance policy. Wenjuan Wang et.al (2017) observed that there is a Positive effect of health insurance coverage on maternal health care utilization. The gender of the head of the family is an important factor in influencing the purchase decision of a health insurance policy.
- **Occupation of Respondents** has shown a significant influence on choice of purchasing health insurance policy. Those who are employed and those in executive positions are likely to purchase health insurance (Ramesh Bhat and Nishanth Jain 2006 ; Bulter 1999; Savage and Wright 1999). Yellaiah and RamaKrishna (2012) expressed that, private employees are found to be more insured. The reason is, in the organized sector, the employer will arrange insurance schemes for their employees. The deduction of the premium amount will be deducted from the salaries of employees. Hence occupation of the head of the family is an important factor in influencing a purchase decision of a health insurance policy.

- **Disposable income of Respondents** has shown a significant influence on choice of purchasing health insurance policy. Income is generally positively correlated (Ramesh Bhat and Nishanth Jain 2006; Van De Ven and Van Praag 1981; Yellaiah and RamaKrishna 2012). Higher income generally decreases the opportunity cost associated with the purchase of health insurance. Increase in income would be expected to lead to an increase in the probability of buying the health insurance as expressed by Ramesh Bhat and Nishanth Jain (2006). Hence the income level of the head of the family is an important factor influencing a purchase decision of a health insurance policy.
- **Awareness factors:** Awareness is defined by Oxford dictionary as “Having knowledge or perception of a situation or fact”. Having knowledge of a product would lead to the purchase of a health insurance. Consumer awareness stimulates demand for health insurance products that fulfil financial needs and expectation of customers that leads to customer delight. The company’s duty is to promote products and services in order create awareness so that the customer finally purchases the products and services. Post purchase, if the customer expectations are met then customer renews his policies. In India knowledge and awareness about health insurance could be an important factor for health insurance purchase decision as opined by Ramesh Bhat and Nishanth Jain (2006). Similarly, Yellaiah and Rama Krishna (2012) expressed that awareness of health insurance scheme is a determinant while purchasing health insurance. Ramesh Bhat and Nishanth Jain (2006) felt that though awareness and knowledge are key factors, awareness of health insurance is at abysmal lower level. Similarly many researchers found that there is lower level of awareness among the respondents they have surveyed. Pooja Kansra (2012); Bawa and Ruchita (2011); Rajesh Singh Kumabam et.al (2013); Maumita Ghosh (2013); Dhiraj Jain(2012); Jangati Yellaiah(2012) and Maheshkumar L Choudhary et.al (2013). Low health insurance penetration is caused due to lower awareness of health insurance in India. On the other hand many researchers have found higher level of awareness in India among the respondents they have surveyed Bhageerathy Reshmi et.al (2012); M. Shanmugapriya M. Chithirai Selvan(2014); Dhiraj Jain And Swapnil Maheshwari(2012); Pooja Kansra(2015) ; Sonal Kala(2015) and B. Reshmi et.al(2007). In this context, there is a positive and negative opinion on awareness of health insurance in India. There is a scope to study the level of awareness of health insurance. Awareness is measured by seven questions -Awareness of Companies offering health

insurance products, Awareness of health insurance of various products offered by the company where he is policyholder, Awareness benefits offered by the Health insurance company, Awareness of exclusion policy, Aware of TPA's, Awareness of Health insurance claims, and awareness of cost classification of health insurance policy.

- **Financial Security:** Health insurance provides financial security to the policyholder. *Financial security* refers to “the peace of mind you feel when you aren't worried about whether your income is enough to cover your expenses. It also means that you have enough money saved to cover emergencies and your future *financial* goals” as defined by quicken.com. Author Michael Mihalik gave a comprehensive definition of financial security as “1) Being debt-free, 2) Being in control of your expenses, 3) consistently increasing your savings/assets/net worth on a monthly basis, and 4) Not being forced to work a job you dislike just for paying the bills”. In this context, the study covers two questions related to Health insurance, whether it provides security against properties in case medical emergency like critical illness and security to family member and self.
- **Product :** It is a contract with a bundle of complex benefits that fit the customer's financial needs. Corporate offer unique features like Hospitalization policy, family floater HI policy, health plan, pre-existing diseases cover plan, senior citizen HI policy, maternity HI policy, critical illness HI policy, pro-active plans, family floaters policy and diseases specific plans to attract every segment in the market. Product differentiation and brand building are deemed to be key elements of insurance product (Mishra & Mishra, 2004). The insurance providers should introduce innovative product features to have an impact on customers purchase decision (Obara et al., 2005). According to Senthil Kumar et al (2014) product consciousness and its availability are the basic things for an effective purchase decision. Ilangoran(2015) found that product features have a significant impact on customer purchase decision making.
- **Premium :** It is a consideration (amount) paid for a contract for the expected benefits. Private insurers price these products with a motive to recover cost and profit margin. Private insurers price the product looking at customer's Health conditions, Age, Gender, Marital status, Habits and avocation, claims history, family medical history, Morbidity, locality, Occupation etc. It can arrive with a condition like rebates in case of No claims history; loading charges for frequent claims history

and co-payment in case of critical illness case. Especially in Indian insurance industry, it's contribution to purchase decisions are found to be irrefutable (Mukherjee,2005). According to Senthil Kumar et al (2014) price influences purchase decision of health insurance. Ilangoran(2015) found that pricing has a significant impact on customer purchase decision making.

- **Place** It is a channel to reach the customer and deliver at his doorstep. Currently, HI players in India are reaching customer through Agents, Brokers, Bank assurance, internet, Kiosks, E-Commerce, Insurance Marketing firms, Supermarkets and call centres. Private health insurers are approaching modern techniques in distribution to deliver to the customer and save cost on each transaction. According to Das(2013) place is the least important element of the mix which affects the customers decision. Similarly, according to Senthil Kumar et al (2014) market Place does not influences purchase decision of health insurance and Ilangoran(2015) found that place or location does not have significant impact on customer purchase decision making.

Objective

This Study aims to test whether there is a relationship between the selected factors and choice of a health insurance company- either public or private.

Hypothesis

There is no relationship between the selected factors on the policyholder's choice of Health Insurance Company.

Data and Methodology

The study was conducted to determine the relationship between the selected factors of customers of private insurance companies and public insurance companies to understand consumer buying behavior. The previous studies have done comparisons of selected factors influencing purchase of health insurance policies between buyer and non-buyer, but none of them compared between private and public health insurance consumer buying behavior. The aim of the study is to determine the relationship between selected factors of customers of private insurance companies and public insurance companies in India in order to fill the gap.

The sample was drawn from the working population data chosen from Jagtial district 5,36,436. The study assumes 10% margin of error and confidence level at 99%. The sample size is as per calculated value — 167 working people for convenience purpose, which is 334 (public and private). Samples considered are those who have purchased health insurance, either public health insurance or private health insurance. The secondary sources consisted of review of websites, books and standard journals. Primary data was collected with the help of a structured questionnaire. Structured questionnaires were given to the individual customer to fill it and personal interaction was done to know about the health insurance policies they have availed.

The factors considered for comparative analysis are 1. Socio-Economic factors (Age, Marital Status, Gender, Income and occupation.) 2. Personal factors (Awareness, Security). 3. Marketing factors (Product features, Price levels, and Distribution).

Data analysis is done using MS-Excel, and IBM SPSS version 20. The statistical tools used were descriptive statistics, logistic regression analysis, ANOVA, *t*-test and reliability and validity tests. Discriminant analysis is done to find out the difference between private health insurance and public health insurance customers and factors influencing choosing a particular institution. The study was restricted to the Jagtial district and a sample size of 334 respondents only.

REGRESSION ANALYSIS OF IMPACT OF FACTORS

An attempt has been made to understand the influence of various factors on the policyholders' choice of Health Insurance Company. Therefore the impact of factors have been tested using Logistic Regression Equation.

Regression Equation

Choice of Health Insurance Company = F(Gender, Marital Status, Age, Low income, High Income, Professionals, Petty Job, Salaried, Awareness, Security, Product, Price, Distribution)

$$\text{Choice} = \beta + \beta_1 \text{ Gender} + \beta_2 \text{ Marital} + \beta_3 \text{ Age} + \beta_4 \text{ LINC} + \beta_5 \text{ HINC} + \beta_6 \text{ PROF} + \beta_7 \text{ PETTY} + \beta_8 \text{ SAL} + \beta_9 \text{ AWR} + \beta_{10} \text{ SEC} + \beta_{11} \text{ PRO} + \beta_{12} \text{ PRI} + \beta_{13} \text{ DIS}.$$

As detailed above, Logistic regression is used test choice of health insurance company using the nominal variables (private =0 and public=1) as dependent variable. The independent variables used in the socio-economic variables such as Age of the respondents, Marital Status, Gender, Low Income group, high income group, Professionals, Salaried, and Petty job holders, Awareness, Security, Product features, Price and distribution.

The Pseudo R^2 , the -2 Log likelihood is minimized criteria is 319.752. Nagelkerke R^2 is 47.3% which indicate model is good but not great. It is spastically significant and fulfill goodness of fitness between the independent and dependent variables.

Table 6.1 Factors Influencing Choice of Selection of Health Insurance Company

Variables	Beta (β)	SE	Sig.	Exp(β)
GENDER (Ref: Female=0; Male=1)	-1.101	0.617	0.075	0.333
MARITAL STATUS Ref: Unmarried=0; Married=1	-1.111	0.913	0.224	0.329
AGE (Ref: less than 40=0; More than 40=1)	0.612	0.576	0.288	1.845
INCOME Middle income Ref: 5L to 7.5L=0				
LOW INCOME LESS THAN 5L=1	-3.679	0.568	0.000	0.025
HIGH INCOME MORE THAN 7.5L=1	0.073	0.545	0.894	1.075
OCCUPATION Ref: SELF EMPLOYED=0				
PROFESSORIAL=1	1.425	0.607	0.019	4.158
PETTY JOB=1	1.087	0.541	0.045	2.966
SALARIED=1	2.169	0.472	0.000	8.747
AWR AWARENESS SCORE	0.015	0.044	0.733	1.015
SEC SECURITY SCORE	-0.132	0.174	0.449	0.877
PRO PRODUCT SCORE	-0.073	0.087	0.400	0.930
PRI PRICE SCORE	-0.023	0.147	0.878	0.978
DIS PLACE SCORE	0.066	0.149	0.658	1.068
Constant	2.101	1.375	0.128	8.178

-2 log likelihood is 319.752 and nagelkerke R square is 0.473.

Gender

Gender is vital element in decision making. Gender coded male as one and female as zero. Male consists of 88% and female consists of 12%. Male opted for private health insurance is 45% and public health insurance is 43%. Female opted for public health insurance is 7% and private health is 5%. The composition of female policyholders is very low.

As per the regression results, the association between Gender and choice of health insurance, is negative with beta coefficient being -1.101, with other variables kept constant,. There is a negative relationship between the two variables. The regressor has a negative effect on the gender and the choice, **it is not statistically significant**. P value is 0.075, greater than 0.05 ($\alpha=0.05$) 5% significant level. It is therefore concluded that as $\text{Exp}(\beta)$ is 0.333, for every 100 males who have purchased health insurance policies from public health insurance company, 33 have purchased from private health insurance company, other things remaining the same.

Marital Status

Marital status has an important element in purchasing decision making. Marital coded married as one and unmarried as zero. Married group consist of 97% and unmarried consists of 3%. 50% of Married people choose private health insurance and 47% choose public health insurance. Unmarried chose public health insurance is 2% and private health insurance is 1%.

Marital Status and choice of health insurance, beta coefficient is -1.111 infers with other variables kept constant, There is a negative relationship between the two variables. The regressor has a negative effect on the marital status and the choice, **it is not statistically significant**. P value is 0.224, greater than 0.05 ($\alpha=0.05$) 5% significant level. If you consider $\text{Exp}(\beta)$ is 0.329, for every 100 married who purchased public health insurance, 33 purchase private health insurance, other things remaining the same.

Age Group

Age group is critical element in decision making. For the study purpose the age group is divided into age less than 40 and more than 40. These are coded as less than 40 as zero and more than 40 as one. Less than

consists of 58% and more than 40 consists of 42%. Age and choice of health insurance, beta coefficient is 0.612 infers with other variables kept constant, If more than 40 aged person purchase a policy, a public health insurance, increase in an average the estimated logit increase by about 0.612 by less than 40years persons, purchase of public health insurance.

There is a positive relationship between the two variables. The regressor has a positive effect on the age and the choice, it is not statistically significant. P value is 0.288, greater than 0.05 ($\alpha=0.05$) 5% significant level. If you consider $\text{Exp}(\beta)$ is 1.845, for every 185 purchases of public health insurance of aged above 40, 100 purchase private health insurance, other things remaining the same.

Income category

Income group is classified for this purpose are low income group i.e., less than 500000, middle income as 500000 to 750000 and 750000 above. They contribute low income 25%, middle income contributes 31% and high income contributes 44%.

Low income group (LINC)

Low income group and choice of health insurance, beta coefficient is -3.679 infers with other variables kept constant, If a high income person purchase a policy, a public health insurance, decrease in an average the estimated logit increase by about 3.679 by low income respondent purchase of public health insurance.

There is a negative relationship between the two variables. The regressor has a negative effect on the low income group and the choice, **it is statistically significant**. P value is 0.000, lesser than 0.05 ($\alpha=0.05$) 5% significant level. If you consider $\text{Exp}(\beta)$ is 0.025, for every 2 low income persons who purchased public health insurance, 100 low income purchase private health insurance, other things remaining the same.

High income group (HINC)

High income group and choice of health insurance, beta coefficient is 0.073 infers with other variables kept constant, If a high income person purchase a policy, a public health insurance, increase in an average the estimated logit increase by about 0.073 by low income respondent purchase of public health insurance.

There is a positive relationship between the two variables. The regressor has a positive effect on the high income group and the choice, **it is not statistically significant**. P value is 0.921, greater than 0.05 ($\alpha=0.05$) 5% significant level. If you consider $\text{Exp}(\beta)$ is 1.075, for every 107 high income persons who purchased public health insurance, 100 high income purchase private health insurance, other things remaining the same.

Occupation category

Income group is divided for these purposes are Self Employed, Professional, Salaried and Petty job. They contribute Self Employed 11%, Professional 6%, Salaried 58% and Petty job 25%.

Professional (PROF)

Professionals and choice of health insurance, which chose private health insurance is 2% and public health insurance is 4%. beta coefficient is 1.425 infers with other variables kept constant, If a Professional person purchase a policy, a public health insurance, increase in an average the estimated logit increase by about 1.425 by professional respondent purchase of public health insurance.

There is a positive relationship between the two variables. The regressor has a positive effect on the professional group and the choice, **it is statistically significant**. P value is 0.019, lesser than 0.05 ($\alpha=0.05$) 5% significant level. If you consider $\text{Exp}(\beta)$ is 4.158, for every 1 professional persons who purchased private health insurance, 4 purchase public health insurance, other things remaining the same.

Petty job (PETTY)

Petty jobholders and choice of health insurance, which chose private health insurance is 17% and public health insurance is 8%. beta coefficient is 1.087 infers with other variables kept constant, If a Petty job person purchase a policy, a public health insurance, increase in an average the estimated logit increase by about 1.087 by petty job respondent purchase of public health insurance. There is a positive relationship between the two variables. The regressor has a positive effect on the professional group and the choice, **it is statistically significant**. P value is 0.045, lesser than 0.05 ($\alpha=0.05$) 5% significant level. If you consider

$\text{Exp}(\beta)$ is 2.966, for every 1 petty job persons who purchased private health insurance, 3 purchase public health insurance, other things remaining the same.

Salary (SAL)

Salary holders and choice of health insurance, which chose private health insurance is 25% and public health insurance is 33%. beta coefficient is 2.169 infers with other variables kept constant, If a salary person purchase a policy, a public health insurance, increase in an average the estimated logit increase by about 2.169 by salaried job respondent purchase of public health insurance. There is a positive relationship between the two variables. The regressor has a positive effect on the professional group and the choice, **it is statistically significant**. P value is 0.000, lesser than 0.05 ($\alpha=0.05$) 5% significant level. If you consider $\text{Exp}(\beta)$ is 8.747, for every 1 salaried person who purchased private health insurance, 9 purchase public health insurance, other things remaining the same.

Awareness (AWR)

Awareness of health insurance is primary factor which influence purchase of a health insurance decision making. The awareness factor consists of seven statements. These statements covers Awareness of health insurance companies, awareness of type schemes, benefits, exclusions, premium, sum assured and services of TPA's. The respondents moderately awareness of health insurance companies, benefits, exclusion, and services of TPA'S. The respondents agree that they are aware of health insurance scheme and claims process. Awareness score is rated with likert's scale five point scale. Awareness and choice of health insurance, beta coefficient is 0.015 infers with other variables kept constant, If a person is aware of health insurance purchase a policy, a public health insurance, increase in an average the estimated logit increase by about 0.015 by purchase of public health insurance. There is a positive relationship between the two variables. The regressor has a positive effect on the awareness and the choice, **it is not statistically significant**. P value is 0.733, greater than 0.05 ($\alpha=0.05$) 5% significant level. If you consider $\text{Exp}(\beta)$ is

1.015, for every 1000 who purchased public health insurance 1015 purchase private health insurance, other things remaining the same.

Security (SEC)

Security is most vital element of health insurance purchase. The statements regarding health insurance purchase are against the financial protection and protection against the loss of property. The financial protection understood by the various respondents against loss of salary, sickness benefits, maternity and paternity benefits, disability benefits, accident benefits, loss of salary during sickness and personal accident and death benefits. The respondents felt that they are neutral towards financial protection. The protection against loss of property, the respondents are particular about this at the point on purchase. This health insurance protect against the sale of fixed assets or property. Security score is rated with likert's scale five point scales. Security and choice of health insurance, beta coefficient is -0.132 infers with other variables kept constant, If a person is security of health insurance purchase a policy of a public health insurance, decrease in an average private health insurance the estimated logit increase by about 0.132 by purchase of private health insurance for every purchases of a public health insurance.

There is a negative relationship between the two variables. The regressor has a negative effect on the gender and the choice, **it is not statistically significant**. P value is 0.449, greater than 0.05 ($\alpha=0.05$) 5% significant level. If you consider $\text{Exp}(\beta)$ is 0.877, for every 1000 who purchased public health insurance 877 purchase private health insurance, other things remaining the same.

Product (PRO)

Product variable is one of 4P's marketing factor contains four statements variables. First statement is health insurance offer attractive schemes, features which are attractive, broader coverage at given price slab. Secondly health insurance scheme are tailor made as the requirement of the customers at attractive price. Thirdly health insurance cover critical illness and finally health insurance covers tax benefit. Product score is rated with likert's scale five point scales. Product and choice of health insurance, beta coefficient is -0.073 infers with other variables kept constant, If a person is product features of health insurance purchase a policy

of a public health insurance, decrease in an average private health insurance the estimated logit increase by about 0.073 by purchase of private health insurance for every purchases of a public health insurance.

There is a negative relationship between the two variables. The regressor has a negative effect on the product and the choice, **it is not statistically significant**. P value is 0.400, greater than 0.05 ($\alpha=0.05$) 5% significant level. If you consider $\text{Exp}(\beta)$ is 0.978, for every 1000 who purchased public health insurance 978 purchase private health insurance, other things remaining the same.

Price (PRI)

Price is second variable in 4P's marketing factor. Price is making attractive to purchase health insurance and retain the customers. Price factor contains two statements. First Statement health insurance provides value for money. Second Statement health insurance is offered by the companies at affordable premium. Price score is rated with likert's scale five point scales. Price and choice of health insurance, beta coefficient is - 0.023 infers with other variables kept constant, If a person is price features of health insurance purchase a policy of a public health insurance, increase in an average private health insurance the estimated logit decrease by about 0.023 by purchase of private health insurance for every purchases of a public health insurance.

There is a positive relationship between the two variables. The regressor has a negative effect on the price and the choice, **it is not statistically significant**. P value is 0.878, greater than 0.05 ($\alpha=0.05$) 5% significant level. If you consider $\text{Exp}(\beta)$ is 978, for every 978 who purchased public health insurance 1000 purchase private health insurance, other things remaining the same.

Place

Place or Distribution (DIS) is third variable in 4P's marketing factor. Place variable contains two statements. Place means distribution of the insurance product to reach out the customer. First variable under this is health insurance easily available. Secondly multiple channels this health insurance policy is available. Distribution score is rated with likert's scale five point scales. distribution and choice of health insurance, beta coefficient is 0.066 infers with other variables kept constant, If a person is distribution system of health

insurance purchase a policy of a public health insurance, increase in an average private health insurance the estimated logit increase by about 0.066 by purchase of private health insurance for every purchases of a public health insurance. There is a positive relationship between the two variables. The regressor has a positive effect on the price and the choice, **it is not statistically significant**. P value is 0.658, greater than 0.05 ($\alpha=0.05$) 5% significant level. If you consider $\text{Exp}(\beta)$ is 1.068, for every 106 who purchased public health insurance 100 purchase private health insurance, other things remaining the same.

Conclusion

From the foregoing analysis made in this paper, the following important conclusions can be drawn:

1. Gender has a negative relationship between the two variables. The regressor has a negative effect on the gender and the choice, and it is not statistically significant.
2. Marital status has a negative relationship between the two variables. The regressor has a negative effect on the marital status and the choice, it is not statistically significant.
3. Age has a positive relationship between the two variables. The regressor has a positive effect on the age and the choice, it is not statistically significant. The choice is more in favour of the Public health insurance company as the age of the policyholder progresses.
4. Interestingly, in low income group people, there is a negative relationship between the two variables. The regressor has a negative effect on the low income group and the choice, it is statistically significant.
5. High income group has a positive relationship between the two variables. The regressor has a positive effect on the high income group and the choice, it is not statistically significant.
6. Professional groups have a positive relationship between the two variables. The regressor has a positive effect on the professional group and the choice, it is statistically significant.
7. Petty jobholders have a positive relationship between the two variables. The regressor has a positive effect on the professional group and the choice, it is statistically significant.

8. Salary class has a positive relationship between the two variables. The regressor has a positive effect on the professional group and the choice, it is statistically significant.
9. Awareness has a positive relationship between the two variables. The regressor has a positive effect on the awareness and the choice, it is not statistically significant.
10. Security factor has a negative relationship between the two variables. The regressor has a negative effect on the gender and the choice, it is not statistically significant\
11. Product has a negative relationship between the two variables. The regressor has a negative effect on the product and the choice, it is not statistically significant.
12. Price has a positive relationship between the two variables. The regressor has a negative effect on the price and the choice, it is not statistically significant.
13. Place has a positive relationship between the two variables. The regressor has a positive effect on the price and the choice, it is not statistically significant.

Thus, it can be observed that the Logistic regression shows relationship between independent variables (factors) and dependent variables (choice). The variables that had insignificant relationship are gender, marital status, age, high income, awareness, security, product, price, and distribution on choice of health insurance company. The variables that exhibited significant relationships are low income, professionals, salaried, and petty job and choice of Health Insurance Company.

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