

An Attribute-Based Perceptual Mapping of Selected Health Insurance Companies: An Empirical Study

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Abstract

The study of consumers' perceptions and positioning a brand accordingly in the minds of the consumers is the winning strategy for any company in the present competitive scenario. This paper is an attempt to know how consumers perceive selected health insurance companies with respect to different important attributes, namely price, service quality, contact personnel competency, and trust. A questionnaire survey among 51 sample respondents was done in the city of Bhubaneswar. Discriminant analysis has been used to draw perceptual map showing the position of selected health insurance companies along with the selected attributes. This study is an attempt to find out the attributes, which influence the choice of a particular health insurance service provider.

Keywords: Attributes, Insurance, Perceptual Map, Positioning, Service Quality

Introduction

In terms of purchasing power parity, India is the fifth largest country of the world and considered to be the fastest growing economy of the globe in the present decade. But unfortunately, its concern for health remains in a worried condition till date. If we will look into the statistics of infant mortality rate, it is as high as 54.6 in India; whereas, only 23 for its neighbouring country China. Today, we find ourselves at a crossroad where the burden of diseases is greater than ever before.

In India, healthcare has always been a problem due to its large population; a greater percentage of this population lives at the bottom of the economic pyramid in rural as well as urban slums. It is clear from the past studies that, to a larger extent, the health indices of a country get determined by the way it gets financed. In Indian context, the governments as well as private bodies have started exploring various health financing options to manage the problem arising out of increasing cost of healthcare and dynamic pattern of diseases. Nowadays, increased income and health consciousness among the majority of the population, price liberalization, and the introduction of private healthcare financing companies have brought the healthcare in India into a state of transition.

In the pre-independence era, the healthcare structure was in a miserable state with high morbidity and mortality rate within the dominance of contagious diseases. In the post-independence era, with an enormous emphasis on healthcare, our country has made a significant progress in improving the healthcare facilities and status of the country. But it is very unfortunate to mention that India is still far behind many of its neighbouring countries such as China, Vietnam, and Sri Lanka in terms of healthcare indicators.

Factors considered to be responsible for this are lack of easy access of people from low-income group to quality healthcare facilities due to the escalating healthcare costs. To beat this situation, health insurance is emerging as an alternative mechanism for financing healthcare.

From the layman's standpoint, health insurance can be understood as an agreement where an individual or

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group purchases health coverage in advance by paying a nominal fee called “premium”. Health insurance includes a wide variety of policies, ranging from policies that cover the cost of doctors and hospitals to those that meet a specific requirement, such as paying for long-term care of the beneficiary.

The status of health insurance is very well established and remarkable in many countries; however, still, in India it has remained as an untapped market. Less than 16% of India’s entire population is covered through health insurance facilities. Although the health insurance market of India still lags behind other countries in terms of penetration, the health insurance segment has enormous opportunities for its growth. It continues to be one of the fastest growing sectors in the Indian insurance industry with gross premiums for health insurance increased by 16% from Rs. 13,212 crore in 2011-12 to Rs. 15,341 crore in 2012-13. The health insurance premium has also registered a compounded annual growth rate (CAGR) of 32% for the past eight financial years.

Review of Literature

Multiple numbers of empirical as well as conceptual studies have been conducted by many researchers regarding the various aspects of health insurance in Indian as well as in a global context. Few of them are represented here.

Within a short span of time, private insurance companies have acquired 13% of the life insurance market and 14% of non-life market (Bhat et al., 2005). Health insurance has gained prominence since the privatization of the insurance sector in India. In India only about 2% of the total health expenses are funded by public or social health insurance, whereas 18% is funded by government budget (Bhat & Mavalankar, 2000). The duo reviewed the health insurance situation in India in terms of the opportunities it provides, the challenges it faces, and the apprehensions it raises and concluded that the quality of service needs to be emphasized by health insurance companies to obtain and sustain their position in the market.

Wang et al. (2006) examined the adverse selection in a subsidized voluntary health insurance scheme, the Rural Mutual Health Care (RMHC) scheme, in a poor rural area of China. The study was made possible by a unique

longitudinal dataset: the total sample includes 3,492 rural residents from 1,020 households. Logistic regression was employed for the data analysis. The results show that the costs of the policy, competency of the agent, and service quality are having a statistically significant impact over the customer’s decision.

Sodani (2001) investigated the community’s preferences in Jaipur, Rajasthan on various aspects of health insurance. His study revealed that trust with a health insurance company, quality of care, and cost are the important factors affecting their decision to subscribe to any new health insurance plan.

Anchan, et al. (2011) studied the claim process of existing health insurance schemes to identify the barriers in the claim process at the hospital level and the consumer awareness and satisfaction level in health insurance. The method employed was cross-sectional study with convenient sampling, data included time analysis format and validated questionnaire. Results showed that price and the personnel are the two important aspects affecting the satisfaction level of customer to a larger extent.

Narang (2010) applied 20-item scale and distributed to 500 users of health insurance in Lucknow, India. The scale was found to be reliable with an overall Cronbach’s alpha value of 0.74. “Service quality” and “contact personnel competency” were found to be statistically significant in affecting the perception.

Problem Statement and Significance of the Study

Among all the other segments of insurance business, health insurance is more complex due to serious conflicts arising out of adverse selection, moral hazard, and non-availability of pertinent information. Varied factors are responsible for influencing the customers in selecting a particular health insurance company. For the successful positioning of any health insurance company, it is necessary to understand the basic dynamics of consumer preferences, namely, price, service, quality, contact personnel competency, and trust of health insurance products. In this connection, the present study is an attempt in this direction to position the leading health insurance companies on the basis of price, service, quality, contact personnel competency, and trust through attribute-based perceptual mapping.

Research Objective

This study has been framed with the following objectives:

1. To find out the relative importance of various attributes of health insurance service providers considered by customers.
2. To find out the positioning of leading health insurance service providers with attribute based perceptual mapping using discriminant analysis.

Methodology

Data Source

This study is mainly based on the primary data. Secondary data are only used for the development of the research framework. A structured questionnaire is used as the main tool for data collection about the consumer's perception regarding the various attributes of leading health insurance service providers.

Sampling Plan

For the purpose of this study, opinions from 51 customers were collected, which included 17 from each of the selected health insurance service providers covering major residential areas of Bhubaneswar city of Orissa. Sample respondents are selected using a judgmental sampling method for this study during May 2016.

Questionnaire Design

A structured questionnaire, framed in English language, was used to collect the data from the sample respondents. The questionnaires were administered by courier, email, and personal delivery. A five-point Likert scale was used to elicit responses to the questionnaire indicating their level of agreement (1= strongly disagree to 5= strongly agree). The questionnaire also contained questions to solicit demographic information of the respondents. The questionnaire is protected and revised through the back translation process for a minor change in the wordings.

Tests Used for Data Analysis

Keon (1983) has defined four methods for measuring a brand's existing or possible positioning, namely, multidimensional scaling, factor analysis, discriminant analysis, and multi-attribute compositional models. In the present study, discriminant analysis has been used as it determines the linear combinations of attributes that best differentiate among brands. The ratings of brands on attributes are used to develop the perceptual map (Shahida P. et al., 2008). Thus, this study also used discriminant analysis for measuring and evaluating the potential positioning of leading health insurance companies as it determines the linear combination of attributes that best discriminate among the leading health insurance companies.

Demographic Profile of Respondent

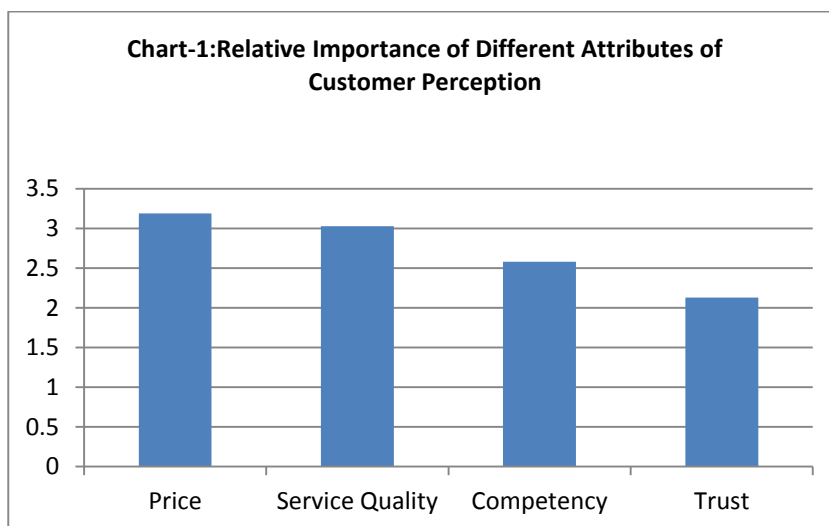
Out of 51 sample respondents, 70% are male and 30% are female respondents. In terms of age group, 57% respondents are in the age group of 31-45, 32% are in the age group of 45-60, and only 11% are below the age of 30. Educational status of the respondents indicates that 60% of total respondents are graduates, 33.4% are post-graduates, and only 6.6% respondents are educated up to secondary level. In terms of occupation, salaried group formed the highest portion with 61.66% respondents, 23.34% belonged to businessman, and 15% of the respondents belonged to professionals.

Analysis and Discussion

In an attempt to find out the relative importance of various attributes of the customer's perception about the health insurance providers, the mean scores were computed (Table 1).

Table 1: Descriptive Statistics

	<i>N</i>	<i>Mean</i>
Price	51	3.1961
Service Quality	51	3.0392
Contact Personnel Competency	51	2.5882
Trust	51	2.1373
Valid N (list wise)	51	



From the descriptive analysis and Chart 1, it is found that price (mean: 3.19) is the most important dimension of customer perception in the health insurance industry, followed by service quality (mean: 3.03), and contact personnel competency (2.58). Trust is the least important attribute of customer perception in the health insurance industry of India. It implies that price & service quality are the most important attributes that a customer will consider more while selecting a health insurance company. So, health insurance companies should focus more on these two attributes to create and occupy a favourable position in the mind of a customer.

In order to provide a visual picture of different health insurance companies with respect to various attributes of customer perception, discriminant analysis was performed and the result is presented as below.

Table 2: Wilk’s Lambda

Test of Function(s)	Wilk’s Lambda	Chi-square	df	Sig.
1 through 2	.072	122.102	8	.001
2	.412	41.218	3	.001

As a result of discriminant analysis, it was found that there is a significant difference among the three leading health insurance companies, namely—Star Health, Apollo Munich, and Max Bupa—as the Wilk’s lambda test revealed that two functions (1 and 2) are statistically significant & both the Wilk’s lambda are close to zero. The chi-square value for function 1 is 122.102 at 8 degrees of freedom with a significance of 0.001. Similarly, the chi-

square of function-2 is 41.218 at 3 degrees of freedom with a significance of 0.001.

In order to examine the relative standing of measurement of variables, an attempt has been made to standardize the coefficients.

Table 3: Standardized Canonical Discriminant Function Coefficients

	Function	
	1	2
Trust	.392	.411
Service Quality	.380	1.023
Contact Personnel Competency	.541	.165
Price	-.967	.105

From the standardized discriminant function coefficients presented in Table 3, it is revealed that there are two different functions based on four attributes of the customer’s perception. Function-1 is consisting of contact personnel competency and price. Likewise, function-2 consists of trust and service quality.

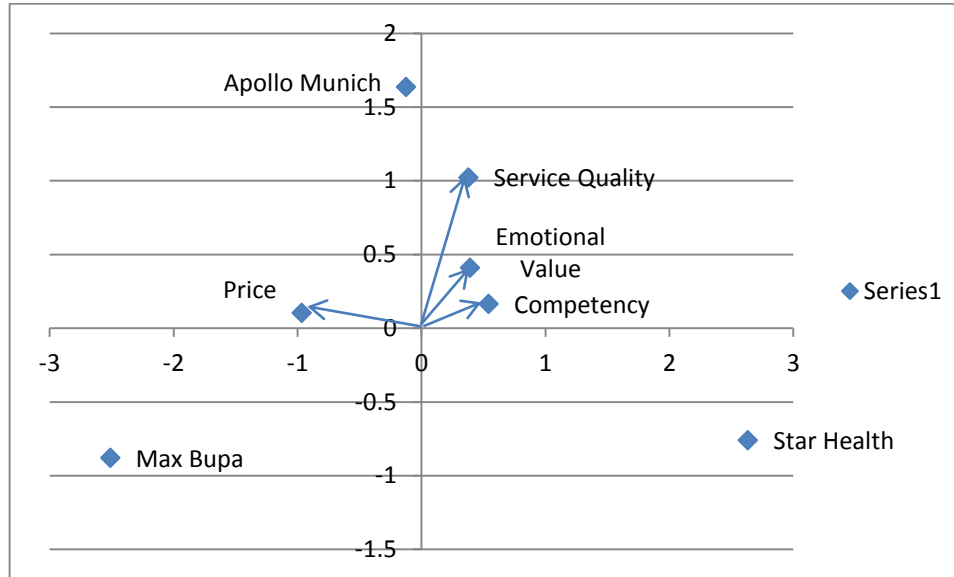
Table 4: Functions at Group Centroids

Insurance company	Function	
	1	2
Star Health	2.634	-.759
Apollo Munich	-.124	1.637
Max Bupa	-2.510	-.878
Unstandardized canonical discriminant functions evaluated at group means		

This table represents the canonical variable (discriminant function) means by group. Using the functions at group centroid as given in Table 4 and the standardized canonical

discriminant function coefficients as given in Table 3, a perceptual map is drawn as under.

Chart 2: Attribute Based Perceptual Mapping of Health Insurance Companies in India



Findings

The above graph represents the vectors for each of the dimensions of customer’s value perception and explains the effect of discriminating on each dimension. Longer arrows pointing more closely towards a given group centroid represent the variable more closely associated with that particular health insurance company. Vectors pointing in the opposite direction from a given group centroid represent lower association with the concerned health insurance company.

As seen from the graph represented as Chart 2, it can be concluded that Star Health, Max Bupa, and Apollo Munich have their unique position on the map. In addition on the same map, now we have plotted values of the attributes on the same two dimensions. As we can see, dimension 1 is a combination of functional value (Price) and competency of contact personnel (closest to X-axis).

Dimension 2 seems to comprise of emotional value and service quality as these are closer to the Y-axis.

Further, Star Health seems to be stronger on dimension 1 (a combination of functional value (price) and contact person competency) and Apollo Munich on dimension 2 (a combination of emotional value and service quality).

Max Bupa seems to be weak in both the dimensions as compared to its competitors.

Conclusion

From this study, it can be concluded that customers of health insurance companies consider price (functional value) as the most important attribute while second is service quality and third is contact personnel competency. Health insurance companies should focus on these attribute more to gain competitive advantage in the present scenario. From the perceptual map, it can be concluded that Star Health has an edge over functional value (price) and contact person competency where both Apollo Munich and Max Bupa were not perceived highly. Service quality and emotional value are reflecting as the strength of Apollo Munich, whereas Max Bupa is not perceived highly. Thus, from the study we can interpret that Max Bupa does not have good value-based positioning in the customers’ mind.

Limitations

This study has been operationalized according to the generally accepted research guidelines. However, it is important to bear in mind some of its limitations while

generalizing its results. First, the results of this study are restricted to the view of 51 sample respondents. Second, this study confines to Bhubaneswar city only. And finally, the author has considered only three health insurance companies which have higher market share and provide most of the health insurance services in the city as well as in the country.

Scope for Further Research

In future, the same type of study may be done through carrying out a survey on larger number of customers of different health insurance companies. As this study is confined to Bhubaneswar only, future studies may ensure data collection from the other customers of rural as well as semi-urban regions, which will help the researcher to avoid the selection bias. Again, this study is confined to only three leading health insurance companies of the state; so in future, more number of health insurance companies can be considered for the same type of study.

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