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A STUDY OF FACTORS INFLUENCING THE PURCHASE DECISION OF HEALTH INSURANCE POLICIES USING AHP APPROACH

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Abstract: The purpose of this paper is to find out the factors which affect the purchase decision regarding health insurance and to evaluate the factor which affects the most and estimates the importance of respective factors. Descriptive study has been conducted in Haryana. Data is collected with the help of questionnaire from 500 respondents. Interviews are also conducted with marketing executives of the health insurance companies to understand the perception of health insurance customers towards health insurance policies. Quantitative aspects are based on factor analysis, CFA analysis and AHP (Analytical hierarchy process) to find out the factors. Result of the study indicate that demographics factors, company related factors, product related factors, psychological factors, Marketing related factors affects the purchase decisions. Income, awareness, goodwill of company, tax gains, agents are major factors affects the decisions. Study has been conducted in Haryana only. Study conducted at different place may have different results. Present study emphasize on factors influenced the customer decision will help top management to develop the product according to the changing requirements of customers and to marketing & Sales force for effective marketing and for developing master plan.

Keywords: Health insurance, customer perception, purchase factor, AHP life.

I. INTRODUCTION

Health Insurance sector has gained importance in today's world, but penetration of health insurance in India is far behind. IRDAI reported only 18% of population covered under health insurance. India is suffering from life style oriented disease. Populations in India still don't want to invest in health insurance. In urban area people look for other investment options where as in rural areas people are not aware about the health insurance and its products. Health insurance companies coming up with product feature enhancements which are covering many diseases is giving boost to the sector. Purchase decisions of any product depend on the customer perception & preference, marketing strategies of the companies, distribution channels opted by the companies. People consider many

factors when they buy health insurance. Factors like individual preference, policy related benefits affect the most of the buying decisions.

II. LITERATURE REVIEW

Health insurance sector is getting immense importance due to change in lifestyle, increase in health care. So many authors already have done many researches in finding the factors which are influencing the purchase decisions of the customer. Personal factors affect the most policy decisions. Age is considered to be main factor, in young age people generally don't want to invest in polices but with the increase in age people started invested in health insurance policies. (Manivannan L, Kumar S,2007). People with young age prefer Private insurance (Ioncical et al , 2012).

Occupation also play important role. It is considered that private employees are more satisfied because their employees offer good health insurance schemes. (Manibvannan,2007). Income is main factor of any buying behavior. Individuals with high income would buy policies. Low income group would be more interested in buying basic necessities. With increase in income people are willing to pay more premiums (Dyuti 2013, Nosratnejad et al 2016, Ioncical 2012). Education also leads to investment in insurance. Educated people are more aware about the insurance schemes and its benefits. Education can be used to increase demand for health insurance schemes (khan, Ahmed, 2013). Personal factor affects the most buying behaviors regarding policies. Product with which, insurance schemes and benefits provided by the insurance companies attract the customers. Products which are useful and affordable to everyone can attract many customers. Health insurance sector struggled a lot to attract and retain customers. Coverage of Illness and risk are the major factor which influences the buying behavior of the customers.(Bhat & jain 2006, Panchal 2013). With the rise in health care cost, companies attract the customers with low premiums, affordable products and protection against the medical cost. (Geol suman, 2017 Kansra pathania, 2012 Joshi Shah, 2014). Many customers invest in the policies to save their taxes (Panchal, 2013). Authors mainly used factor analysis and regression based to evaluate these factors. In table 1, compiled the factors identified in the literature

Table 1: Different factors discussed in earlier studies

Age	Coverage of illness	Premium base
Income	Knowledge of illness	Illness expenditure
Period of buying	Education	After sale services
Race religion	Job sector	Risk attitude
Formalities	Hospital coverage	Brand
Promotion	Life style issues	Reimbursement policy
Effectiveness	Poor health	Cashless hospitalization benefit
Product perception	Health security	Price
Revenue	Awareness	Claims
Hidden cost	Disease coverage	Tax relief
Benefits	Schemes	Specific products
Accessibility	Compulsion for employees	Affordability
Savings	Frequency of premium payment	Mode of repayment
Lack of information	Satisfaction about agent services	future contingencies
Availability of subsidized govt. health care	Linage with government hospital	

III. RESEARCH GAP AND CONTRIBUTION

The review of Literature finds that there are almost 40 factors which are found important while taking the purchase decision of health insurance. The objective of this study is to find the factors, which importantly affects the purchase decision. Study focus is on the factors grouped in heading.

In Literature, mainly regression based approaches has been focused, they ignore subjectivity while noting the preferences. In the study, AHP is being used to accommodate the subjectivity in decision making process.

Further, we have not observed any study done with the use of AHP in insurance sector in Haryana. Publications found are mainly based on awareness about the health insurance.

IV. OBJECTIVE OF THE PRESENT STUDY

Purpose of the paper is to understand the customer’s perception towards buying health insurance. Insurance companies are moving towards customer centricity always tries to deliver right product at right time. Objectives of the study are as follows:

- To find out & study the factors which influences the buying behaviour of the customers.
- To find out the factors that influence the most while taking decision to buy or not to buy health insurance.
- To find out the relative importance of the factors.

V. RESEARCH METHODOLOGY & RESEARCH FRAME WORK

Present study has been carried out in major districts of Haryana. Ambala, Kurukshetra, Panchukla, Hisar, Yamunagar, Sonipat, Karnal, Panipat has been taken for study. These districts of Haryana are very prominent as per ‘Statistical Abstract of Haryana’. Literacy rate in these districts is more than 75%, whereas per capita income of the districts are more than Rs. 50000. Manivannam L, Kumar S(2007) found that income and education is positively related while making health insurance decisions. Hence for the study districts with higher per capita income & higher literacy rate has been taken. Primary data was used in the study. Required information was collected with the help of a well-structured questionnaire. Questionnaire for the study contained open ended & close ended questions. Data is collected from the health insurance users. Likert-scale has been used in questions to study the factors. Likert scale depicts the value 1 for strongly agree and 5 for strongly disagree. Data has been collected with the help of questionnaire from 550 respondents and 500 found suitable for the studies. Pilot study has been done on 100 respondents to check the reliability of the questionnaire. Recommendations and suggestions have been taken from the pilot survey, after that questionnaire was revised.

In the study, Factor Analysis & AHP has been used for evaluating the factors found from previous studies which effect the purchase decision of health insurance policies. AHP (Analytic hierarchy process) is a decision making application. It is developed by Thomas L. Saaty in 1970s. AHP helps to find the decision which is according to their needs and priorities.

VI. DATA STRUCTURING

A two tier AHP model is found suitable for the purpose of the study. Factors further sub divided into categories. Regarding data collection, information is collected through questionnaire from 500 respondents from the various districts of Haryana. Person those who are having health insurance being identified as respondents then responses were taken. Health insurance companies can take care of

these factors while approaching the potential customers. Demographic profiles of respondents are shown in Table 2:

6.1 Demographic profile of respondents

N= 500

Table 2: Demographic Profile of respondents

Profile features	Categories	No of respondents
Gender	Male	259 (51.8%)
	Female	241 (48.2%)
Age	Below 30	62 (12.4%)
	31-40	193 (38.6%)
	41-50	196 (39.2%)
	51-60	49 (9.8%)
Qualification	Graduate	127 (25.4%)
	Post graduate	295 (59%)
	Any other	78 (15.6%)
Type of family	Joint	276 (55.2%)
	Nuclear	224 (44.8%)
Income	Below 1 Lakh	22 (4.4%)
	Rs 1 Lakh- Rs 3 Lakh	104 (20.8%)
	Rs 3 Lakh – Rs 5 Lakh	211 (42.2%)
	Above Rs 5 Lakh	163 (32.6%)
Employment	Agriculture	32 (6.4%)
	Self-employment/business	166 (33.2%)
	Professional	90 (18%)
	Private organization employed	179 (35.8%)
	Government Service	29 (5.8%)
	Other	4 (.8%)

Above table shows that the majority of respondents are male members and the decision of finances in the family is majorly taken by the male members. Majorly respondents are from age of 41-50 years (37.2%) followed by 31-40 years(25.6%), age group of 51-60 years having 16.4 % respondents where as below 30 & above 60 are having approx 10 % respondents. Whereas Education is concerned, 39.2% of respondents are postgraduate, 29.6% of respondents are graduates 17.2 % of respondents are having secondary qualification. From the above table, Income 44% of respondents are having income more than 5 Lakhs followed by 28.8% are from 3 lakh to 5 lakh income group. 27.2% are from income group of 1 lakh – 3 Lakhs.

VII. DATA ANALYSIS & RESULT

7.1 Factor Analysis

Table 3 : KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.888	
Bartlett's Test of Sphericity	Approx. Chi-Square	4592.319
	Df	210
	p-value	0.0001**

Kaiser–Meyer–Olkin (KMO) measure and Barlett's test of sphericity signifies the appropriate factor analysis. Results showing between the value 0.5 and 1 indicate that factor analysis is very useful. A result below 0.50 indicates that factor analysis is not useful. Table 3 shows the result of KMO is 0.888, which clearly states that result of factor

analysis is very appropriate because it lies between 0.5 and 1.

Table 4 : Component Matrix					
	Component				
	1	2	3	4	5
Satisfaction about agent service	0.715				
Gender	0.714				
Reimbursement Policy	0.683				
Risk cover	0.661				-0.447
Coverage	0.657				
Occupation	0.654		-0.447		
Convenience in purchasing	0.648				
Tax gains	0.645				-0.500
Age	0.639		-0.414		
Education	0.610		-0.487		
Goodwill of company	0.601				
Income	0.593		-0.508		
Availability of additional services	0.587		0.472		
Knowledge	0.569				
Operational	0.555				
Information	0.554				
Attitude	0.526			0.430	
Direct Marketing		0.907			
Agents		0.903			
Advertisement		0.733			
Awareness	0.424			0.525	

Table 4 shows the component matrix results that reveals the loadings of the twenty one variables on the five factors extracted. For the analysis, factors with higher value of loading contribute more to the variables. Thus, it is clear from the table that factor one contributes the most, followed by second, third, fourth and fifth in descending order.

Table 5 shows the rotated component matrix. In this matrix, results found by component matrix are clubbed correlated factor under one factor. These five factors are having Eigen values ranges 1.1 to 6.9.

7.2 Confirmatory factor analysis (CFA)

CFA is a factor analysis method which helps in specification and testing of latent variables, latent variables are the factors which are measured with the help of factor analysis.

Table 5 : Rotated Component Matrix					
	Component				
	1	2	3	4	5
Income	0.783				
Education	0.759				
Occupation	0.756				
Age	0.717				
Gender	0.692				
Goodwill of company		0.789			
Convenience in Purchasing		0.767			
Availability of additional services		0.760			
Satisfaction about agent service		0.675			

Reimbursement Policy		0.673		
Tax gain			0.783	
Risk cover			0.744	
Coverage			0.651	
Operational			0.621	
Agents				0.920
Direct Marketing				0.919
Advertisement				0.750
Awareness				0.777
Attitude				0.667
Knowledge				0.659
Information				0.595

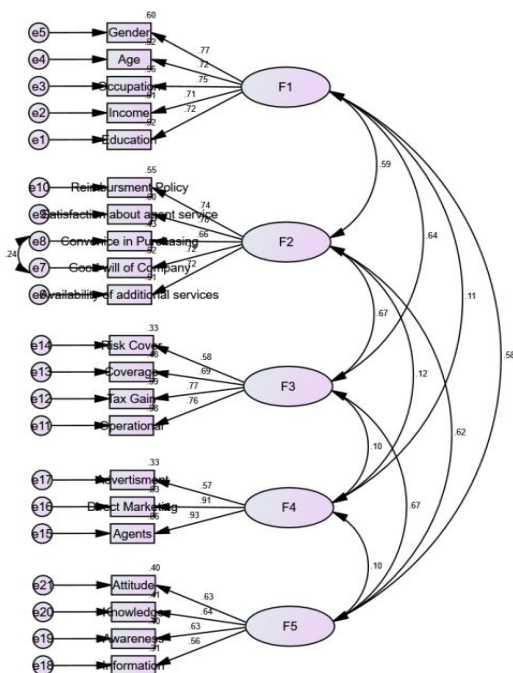
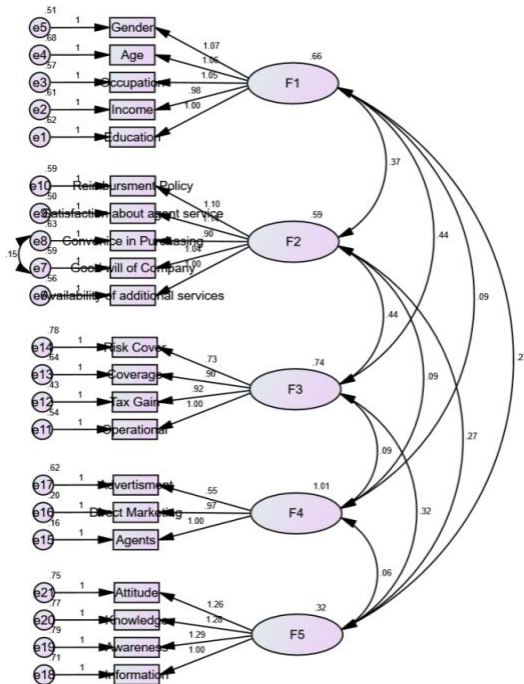


Figure 1: Path diagram of confirmatory factor analysis

Figure 1 represents the multiple regression models in which the latent variables viz. F1, F2, F3, F4 and F5 which were shown in the oval shape and were predicted as the linear combination of the observed variables shown in rectangles. Every single headed arrow represents the standardized regression weight of the observed variables on underlying latent constructs. The double headed arrows represent the correlation between the constructs and the values associated with them are the correlation coefficients. Table 8 represents the statistics involved in the model which is represented in above figure. The estimates or standardized path coefficient was calculated for various constructs, by keeping one of regression weight as 1 for reference and calculated others according to that. Such as, for factor F1 construct Education variable was the reference and weights for Income, Occupation, Age and Gender was calculated according to that.

To construct F2, weight for variable availability of additional services has assigned as 1 and weights for Goodwill of Company, Convenience in Purchasing, Satisfaction about agent service and Reimbursement Policy has predicted according to that. To construct F3, weight for variable Operational assigned with the value 1 and weights for variables Tax Gain, Coverage and Risk Cover predicted according to that. To construct F4, weight of value 1 assigned to the variable Agents and weights for variables Direct Marketing and Advertisement were predicted. To construct F5, weight of value 1 assigned to the variable Information and weights for variables Awareness, Knowledge and Attitude. And all the estimates were predicted with the extreme significance as p-value is less than 0.001 and hence all resulted in acceptance.

Table 6: Relationship among factor, F1, F2, F3, and F5

Correlation			
			Estimate
F1	<-->	F2	0.595
F1	<-->	F3	0.637
F1	<-->	F4	0.106
F1	<-->	F5	0.584
F2	<-->	F3	0.667
F2	<-->	F4	0.115
F2	<-->	F5	0.624
F3	<-->	F4	0.101
F3	<-->	F5	0.669
F4	<-->	F5	0.105

7.3 Model fit

The measurement model exhibited an acceptable model fit of the data (CMIN = 390.371, df = 178, p < 0.001; CMIN/df = 2.193 (< 5); CFI = 0.952; TLI = 0.944; IFI = 0.953; NFI = 0.916; PNFI = 0.777; PCFI = 0.807; PRATIO = 0.848 and RMSEA = 0.049). All the indicators are loaded, with very

high significance, on the latent variables. The values of the fit indices indicate a good of the model with the data. Overall, the measurement model confirms to the six-factor structure.

7.4 Reliability

The Cronbach’s alpha is the measure of internal consistency, that is, how closely related a set of items as a group. It is basically a coefficient of reliability. The Cronbach’s alpha for the factors F1, F2, F3, F4 and F5 were **0.854, 0.852, 0.789, 0.841 and 0.711** which are acceptable and this shows that the factors are reliable.

7.5 Construct validity

Construct validity is the extent to which a set of measured variables actually reflects the latent construct they are designed to measure. Construct validity is established by establishing the face validity, convergent validity and discriminant validity. Face validity was checked by adopting the observed items used in the study from the existing literature and adapting the same to the present research context.

Table 7: Measurement of construct validity factors

	CR	AVE	MSV	MaxR(H)	F1	F2	F3	F4	F5
F1	0.854	0.54	0.405	0.856	0.735				
F2	0.845	0.523	0.445	0.849	0.595	0.723			
F3	0.795	0.496	0.447	0.809	0.637	0.667	0.704		
F4	0.855	0.672	0.013	0.919	0.106	0.115	0.101	0.82	
F5	0.71	0.38	0.447	0.713	0.584	0.624	0.669	0.105	0.617

Convergent validity is checked by observing the factor loadings and average variance extracted from the constructs. All the indicators had significant loadings onto the respective latent constructs ($p < 0.001$) with values varying between 0.71 and 0.855. Furthermore, the average variance extracted (AVE) for construct is greater than 0.50, but factor F5 is less than 0.50. With the help of factor analysis following factors have been extracted:-

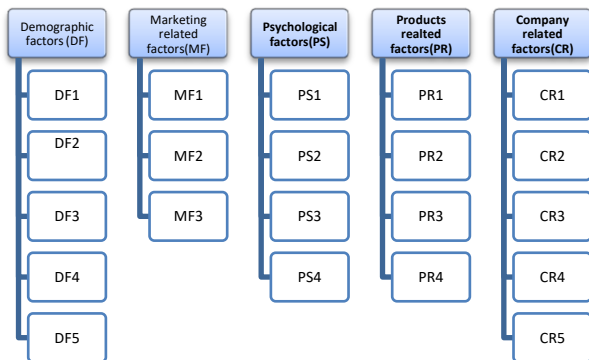


Figure 3: Factors affecting health insurance purchase decision

VIII. EVALUATION OF PERSONAL FACTORS (PF)

Table 8: Pair wise comparison matrix of personal factor affecting the purchase of health insurance

Pair wise comparison	PF1	PF2	PF3	PF4	PF5
PF1	1	3	5	.2	0.1111
PF2	0.333	1	5	1	9
PF3	0.2	0.2	1	5	1
PF4	5	1	0.2	1	7
PF5	9	0.1111	1	0.1428	1

For personal factors, 5 by 5 comparison matrix is formed to compare the criteria involved in factors affecting decision making. In the table, when the criterion is compared with itself, input value is ‘1’ means equally important. E.g.: Education vs. Education, Income vs. income and age vs. age. For e.g.: In matrix every cell has assigned some values which reflect their preference. It is considered that income is moderately more important than Education will contain the value 3 (income/ education). Opposite comparison yields the reciprocal value (Education /income) is assigned 1/3. Next, Occupation is considered strongly more important than Education, so (occupation/education) holds value 5, whereas opposite (education/occupation) has reciprocal value 1/5.

Moving to next cell, Age is considered to be strongly more important than Education so (Age/Education) cell contains ‘5’, in this education education/age cell will be assigned reciprocal value. In the last cell gender is extremely important than education (gender /education) cell contain 9, whereas (Education/gender) will contain the reciprocal value. These kind of paired comparison been done in all matrix related to other factors which effects the preferences of the customers

Table 9: Calculation of consistency ratio

	PF1	PF2	PF3	PF4	PF5	Sum	Weig ht	Ra nk
PF1	0.2234 6174	0.227 656	0.225 618	0.217 572	0.220 899	1.115 206	0.223 041	2 nd
PF2	0.2272 9584	0.228 671	0.230 377	0.231 026	0.229 544	1.146 914	0.229 383	1 st
PF3	0.1724 7841	0.177 535	0.180 085	0.190 73	0.177 249	0.886 419	0.177 284	4 th
PF4	0.2096 6977	0.205 76	0.206 544	0.211 916	0.210 397	1.044 287	0.208 857	3 rd
PF5	0.1670 9424	0.160 37	0.157 377	0.160 414	0.161 911	0.807 175	0.161 435	5 th
Sum	1	1	1	1	1	1	5	
Maximum Eigen Value(λ max)	2.0692							
CR ratio	0.0622							

In next step, normalization has been done for the matrix by totaling numbers in each column. Comparison matrix is raise to the power until column become identical. For this calculation, excel matrix multiplication =MMULT () has been used. This is also known as Limit matrix. In personal factors, AHP is used to study with in the factors of personal factors which are more important. Between the five

alternatives, ranking shows PF2>PF1>PF4>PF3>PF5, PF2 is main factor affected purchase decisions. Results indicated that income (0.229383) of consumer attracts them towards purchasing health insurance, generally consumer with higher income purchase health insurance, Education (0.223041) is important factor after income because people with higher Education are more aware about the benefits of Health insurance.

Calculations of other factors have been done in same manner.

IX. MARKETING RELATED FACTORS(MF)

Table 10 : Calculation of consistency ratio

	MF1	MF2	MF3	Nth root priority weight	Eigen vector(λ)	Ranks
MF1	1	3	0.1428	0.312346	2.602883852	2 nd
MF2	0.3333	1	5	0.393639	1.653285481	1 st
MF3	7	0.5	1	0.294015	1.806089302	3 rd
Maximum Eigen Value (λ_{max})	2.20753					
Consistency ratio	0.03578					

AHP matrix, weights shows the ranking MF2>MF1>MF3. Advertisement (0.393639) affects the purchase decision of the customers followed by Agents (0.312346). Advertisement plays an important role for any product's marketing. It is found that consumers also make decisions depends on advertisement.

X. PSYCHOLOGICAL FACTORS (PS)

Table 11: Comparison matrix for Psychological factors

	PS1	PS2	PS3	PS4	Nth root priority weight	Eigen vector(λ)	Ranks
PS1	1	3	5	0.1111	0.273415	2.8799749	3 rd
PS2	0.3333	1	7	3	0.277068	1.240209	2 nd
PS3	.2	0.1428	1	3	0.15168	2.022403	4 th
PS4	9	0.333333	0.333333	1	0.297836	2.117947	1 st
Maximum Eigen Value (λ_{max})	10.533333	4.47619	13.333333	7.11111	1		
Consistency ratio	2.065134						
	0.07237						

Between the five alternatives, ranking shows PF4>PF2>PF1>PF3, PF2 is main factor affected purchase decisions. In psychological factors, results shows that the more important factor is awareness (0.297836), awareness

about health insurance policies helps them to take decisions regarding the purchase of policies. Attitude (0.273415) is found the second important factor which effects the purchase decisions of customers. If the customers are more aware about the health insurance only then they will be able to take decision regarding purchase.

XI. PRODUCT RELATED FACTORS (PR)

Table 12: Calculation of consistency ratio

	PR1	PR2	PR3	PR4	Nth root priority weight	Eigen vector(λ)	Ranks
PR1	1	0.1428	3	0.1111	0.144478	2.504282603	4 th
PR2	7	1	0.2	5	0.309281	1.961725623	1 st
PR3	.3333	5	1	0.3333	0.296605	2.135556485	2 nd
PR4	9	0.2	3	1	0.249636	1.60876548	3 rd
Maximum Eigen Value (λ_{max})	17.3332.052583	6.34285	7.2	6.444444		8.21033	
Consistency ratio	0.058425054						

Matrix of product related factors shows that Tax gains (0.309281) is considered to be major factor influence the purchase decision followed by coverage (0.296605). Health insurance companies provide coverage against disease and hospitalization.

XII. COMPANY RELATED FACTORS (CR)

Table 13: Calculation of consistency ratio

	CR1	CR2	CR3	CR4	CR5	Nth root priority weight	Eigen vector(λ)	Ranks
CR1	1	0.142857143	5	3	0.111111	0.126833	2.223796	4 th
CR2	7	1	3	5	5	0.393898	0.739027	1 st
CR3	0.2		1	0.2	9	0.187668	2.648208	2 nd
CR4	0.33333333	0.2	5	1	0.1428571	0.11948	1.935860	5 th
CR5	9	0.2	0.1111111	7	1	0.172104	2.625264	3 rd
Maximum Eigen Value (λ_{max})	17.533333	1.876190476	14.111111	16.2	15.253968			
Consistency ratio	2.034431							
	0.030742155							

Company related factors matrix states CR2>CR3>CR5>CR1>CR4. Matrix of company related factors shows that goodwill of company (0.393898) is considered to be major factor influence the purchase decision followed by convenience in purchasing (0.187668). Reimbursement policy of company also consider as important factor while purchasing the health insurance.

XIII. COMPARISON OF ALL FACTORS

Table 14: Comparison matrix for all factors

	CR	PR	PS	DF	MF	Nth root priority weight	Eigen vector
CR	1	0.2	0.142857143	3	0.2	0.113854	2.08731
PR	5	1	5	0.111111	5	0.277317	2.93956
PS	7	0.2	1	5	7	0.265469	1.721757
DF	0.333333	9	0.2	1	9	0.295192	2.722321
MF	5	0.2	0.142857143	0.111111	1	0.0481868	1.0693383
	18.333333	10.6	6.305714286	9.222222	22.2		
Maximum Eigen Value (λ_{max})	2.10806						
Consistency ratio	0.096481834						

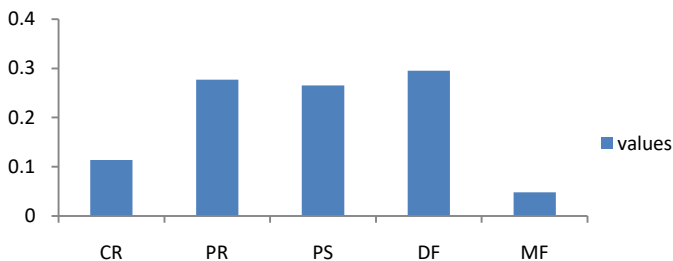


Figure 3: Result for comparison of all factors

Above matrix of all factors shows the results DF>PR>PS>CR>MF, clearly states that personal factors (0.295192) effects the purchase decision of the customers. Product attracts the customer’s frames a image of the company in the mind of customer, product related factors (0.27731) like premium base, tax gain etc attracts the customer to purchase health insurance. Between these factors Psychological factors (0.265469), company related factors (0.113854) and marketing factors (0.0481868) respectively influence the purchase decision of the customers.

XIV. DISCUSSION ON FINDINGS

The AHP method was adopted by using Microsoft excel to priorities the factors. These are the factors which influences the purchase decisions of the consumer. By tapping these factors insurance company may able to cover more consumers. Study was conducted to understand the factors which influence the purchase decisions while purchasing insurance in Haryana. Initially factors are divided into five parts which are Personal factors, company related factors, and product related factors, psychological factors, marketing factors. These factors again divided into sub criteria to simplify the choices. From personal factor Income more important than age, occupation, gender and Education. Income appears to be important factor which mainly effect the purchasing decision of the consumer. People with lower income can think about their basic necessities, people with higher income invest their income in insurance policies. Current incomes as well as future income expectation also influence the purchase decisions. If future income expectations are high then also person spend more on purchasing. Education Level of the customers also affects the purchasing decision regarding policies. Education leads to developed attitudes, better lifestyles. Educated people have knowledge about the products and their benefits. Also occupation tells the worth of people. In case of CEO’s, doctors, college professors etc. they are likely to purchase more insurance policies. Awareness about the product is major factor which pushes customer towards the product. Person those who are more aware about the insurance policies and their benefits tend to invest more in Insurance.

Studies showed that people are taking health insurance for their health security and financial security. Many are taking insurance to avoid taxes. Health Insurance is becoming tool for tax saving. Coverage of disease and hospital in the policy is also very important product related factor.

Health insurance purchase decision also affected by goodwill & reputation of the company. Investors want to invest money in safe hands.

Health insurance companies sell their services through agents & advertising. Advertisement plays important role to attract the customers. Agents knowledge and after sale services attracts many customers. So all these factors affects the purchasing decision of the customers.

Table 15: Calculation and Ranking of Overall Weight of Factors

S.No.	Factors affecting the health insurance decisions	Final weights	Rank factors	S.No Identified factors	Local weights	Overall weights	ranking	
1	Company related factors(CR)	0.113854	4 th	1.1	CR1	0.126833	0.01444	19 th
				1.2	CR2	0.393898	0.04484	12 th
				1.3	CR3	0.187668	0.02136	15 th
				1.4	CR4	0.11948	0.01360	21 th
				1.5	CR5	0.172104	0.01959	16 th
2	Product related factor (PR)	0.277317	2 nd	2.1	PR1	0.144478	0.04006	14 th
				2.2	PR2		0.10893	1 st
						0.309281		

				2.3	PR3	0.296605	0.08225	2 nd
				2.4	PR4	0.24963	0.06922	6 th
3	Psychological factors (PS)	0.265469	3 rd	3.1	PS1	0.273415	0.07258	5 th
				3.2	PS2	0.277068	0.07355	4 th
				3.3	PS3	0.15168	0.04026	13 th
				3.4	PS4	0.297836	0.07906	3 th
4	Demographic factors (PF)	0.295192	1 st	4.1	PF1	0.223041	0.06583	8 th
				4.2	PF2	0.22383	0.06607	7 th
				4.3	PF3	0.17728	0.05233	10 th
				4.4	PF4	0.208857	0.06165	9 th
				4.5	PF5	0.16143	0.04765	11 th
5	Marketing related factors (MF)	0.048186	5 th			0.31324	0.01509	18 th
5.2	MF2	0.39363	17 th					
5.3	MF3	0.29410	20 th					

14.1 Practical & Strategic implication of research

In this study, factors effected the health insurance purchase decision have been studied, AHP technique is used to analyze factor which effected the purchase decision of health insurance policies & importance of each level have been judged.

14.1.2 Product related factors (PR)

It is related with product of the company. It will help managers and company to understand the product related requirement of the customers. Product is the lifeline of the company. By studying these factors companies can make necessary changes in the product which can attract more customers. It is observed that tax gain, coverage of disease and hospitals considered being important.

Parties involved: Top Management

Action Plan: can develop new products according to the changing requirements of customers.

14.1.3 Company related factors (CR)

There are nearly 53 insurance companies in India, 24 Life insurance & 29 non- life insurance companies. With these companies providing health insurance services, few standalone health insurance companies came into existence. A company can attract its customers by its goodwill. Customer with product giving importance to company image, reimbursement policy, type of additional services provided by the company. To attract the customers companies should fasten the reimbursement procedures provide additional services like free health checkups etc

Parties involved: Agents, employees.

Action Plan: Develop strategy to improve & enhance company's image.

14.1.4 Marketing related factors (MF)

Sales force and advertisement by the company help it to sell its product. Company can sell their product in new areas according to the market requirements. It is observed in the study, advertisement plays an important role in marketing of a product. Advertisement plays an important role in marketing of a product. Advertisement can encourage potential customers. Competitor may also choose the same promotion tool as company. So company has to keep watch on competitors too. Companies can use innovative product and process to attract the customers.

Parties involved: Competitors, Marketing and sales force.

Action Plan: for effective marketing and sales develop a effective master plan.

XV. CONCLUSION, LIMITATIONS OF THE STUDY

In this research paper, 21 critical factors have been identified and five dimensions related to the factors effecting the purchase decisions of the customer. Health insurance has been recognized which are gaining advantage over insurance policies. In India, where medical tourism is rising and expected to grow nearly 7-8 billion dollars by 2020, people of India are getting more aware about health facilities.

In the study, critical factors which effect the purchase decision of the customer attempt to sort, evaluate and analyze. AHP has been used to give weights and ranking to these critical factors.

- It has been observed that product related factors have great impact on the purchase decision.
- 'Tax gains', 'coverage about diseases', 'Attitude', 'awareness', 'income', and 'age' has been identified highly ranked CFs.
- According to overall weight value 'Tax gain' ranked top most factor.

An attempt has been made to study CFs which effects the purchase decision of the customers while purchasing health insurance, following limitations have been found:

- Area of research is limited. Same research can be done for whole India.
- AHP priorities may be prejudiced; pair wise comparison tends to be artificial way to compare the inputs.

XVI. REFERENCES

- [1]. Anand alakshmy A, Brindha K (Feb. 2017), Policy holders' awareness and factors influencing purchase decisions towards health insurance in Coimbatore District, International journal of commerce and Management research, Vol. 3, Issue 2, pp 12-16.
- [2]. Bhat R, Jain N (2006), Factoring affecting Demand for Health insurance in a Micro Insurance Scheme, Paper presented at IIM Ahmedabad.
- [3]. Bakar et al (2012), Factors affecting demand for individual health insurance in Malaysia, BMC public health, V 12(suppl 2).
- [4]. Chithirai Selvan M, Shanmugapriya M(2015), Rural Policy holders preference on Health Insurance, Asian Journal of Management research, Vol 5, issue 4, pp 470-480.
- [5]. Dyuti (2013), Determinants of consumer purchase decision of Health Insurance in Kerala, Thesis submitted to Cochin University of science and Technology.
- [6]. Goel suman(2014) Health Insurance : An empirical study of consumer behaviour in Rohtak District of Haryana. International journal of

- research in Management, Science & Technology, Vol 2, No 2. Pp 69- 72.
- [7]. Ioncical et al (2012), the role of education on consumer behaviour on the insurance market (46), 4154-4158
- [8]. Joshi, shah (2015), An Empirical study on consumer's perception towards Health insurance in Ahmadabad city presented at 2nd International conference on Science, technology and management.
- [9]. Kansra pooja and Gill H (2017), Role of perception in Health Insurance buying behaviour of workers employed in Informal sector of India, Global Business Review .18(1) pp 250-266.
- [10]. Kansra & Pathania(2012), A study of factor affecting the demand for health insurance in Punjab, Journal of Management and science. Vol 2. No 4,pp 1-10
- [11]. Khan AM, Ahmed Sayem(2013) Impact on educational intervention on willingness to pay health insurance : A study of informal sector worker in Bangladesh , health economics review (2013)
- [12]. Manivannan L, Kumar S (2007) A study on marketing problems and prospects of health insurance policies in Coimbatore District, AIMA, vol. 1 issue 4/4.
- [13]. Mathur et al(Feb. 2015) Understanding perception and factor influencing private voluntary health insurance policy subscription in the Lucknow region, IJHPM , Vol. 4, Issue 2, pp 75-83
- [14]. Moorthy, kumar (2013), A study on customer perception towards health insurance policies, Excel International journal of Multidisciplinary Management studies , Vol 3.
- [15]. Nosratnejad et al (2016) factors influencing basic and complementary health insurance purchasing decision in Iran: Analysis of data from National survey, World Medical and Health Policy, pp 179-196
- [16]. Panchal N (2013) Customer's Perception towards health insurance – An Empirical Study in Badoli & Mandvi region, International Applied research – Vol. 3, Issue 4, pp 62-64
- [17]. Perianayagan A and Goli S.(2013), Health Insurance and health care in India : a supply demand perspective, Munich Personal RePEc Archive, paper no 51103.
- [18]. Owusu-Sekyere, Ebenezer, and Anthony Chiaraah(2014). "Demand for Health Insurance in Ghana: What Factors Influence Enrollment?" American Journal of Public Health Research 2.1, pp27-35.
- [19]. Yellaiah J, Ramakrishna G.(2012), Socio-economic determinants of health insurance in India : Case of Hyderabad city, International Journal of Development & Sustainability , Vol 1 No 2 pp 111- 119.
- [20]. Chhabra, D., Bhushan, G., & Chandna, P. (2016). "Optimal placement of piezoelectric actuators on plate structures for active vibration control via modified control matrix and singular value decomposition approach using modified heuristic genetic algorithm." *Mechanics of advanced materials and structures*, 23(3), 272-280.
- [21]. Kumar, S., Dhingra, A.K., Singh, B. (2018). "Process improvement through Lean-Kaizen using value stream map: a case study in India." *International Journal of Advanced Manufacturing Technology* 96(5-8), pp. 2687-2698
- [22]. Kumar, S., Dhingra, A.K., Singh, B. (2018). "Kaizen selection for continuous improvement through VSM-Fuzzy-TOPSIS in Small-Scale enterprises: An Indian case study." *Advances in Fuzzy Systems* 2018
- [23]. Kumar, S., Dhingra, A.K., Singh, B. (2018). "Cost reduction by value stream mapping using Lean-Kaizen concept: a case study." *International Journal of Productivity and Quality Management* 24(1), pp. 12-32
- [24]. Kumar, S., Dhingra, A., Singh, B. (2018). "Lean-Kaizen implementation: A roadmap for identifying continuous improvement opportunities in Indian small and medium sized enterprise." *Journal of Engineering, Design and Technology* 16(1), pp. 143-160