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# A Study On The Development Of Utility Function For Life Insurance Buyers In The Indian Market With Reference To Hdfc Standard Life Insurance

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## INTRODUCTION

Insurance is the best protection against risk attached to business, property and life. Insurance is done against the contingency that it may happen. Insurance is relevant only if there is uncertainty. Insurance does not actually protect the asset against risk; rather it tries to reduce the impact of risk on the owner of the asset. It compensates the loss incurred by the owner. Only economic or financial loss can be compensated. The loss is compensated from the fund created out of the amount collected in advance called premium. The liberalization of the Indian insurance sector has resulted in a number of insurance companies entering the market. This has led to a plethora of choices both in terms of service providers as well as products to the consumers. With the huge untapped market that still exists, the insurance market in India is expected to increase rapidly. In this paper we attempt to develop a ready reckoned to match the buyer's requirement with the products that the HDFCSLIC insurance company offering. This study is

aimed at finding the customers preferences of life insurances products of HDFC SLI based on the attributes.

## STATEMENT OF THE PROBLEM

In this era, life insurance in the financial sector plays a major role. The buying decision for insurance products involves many factors. In this regard the insurance buyers have to consider the various factors in the buying decision process.

The Development of utility function for life insurance buyers in the Indian market is the area to be concentrated So this necessitates to identify the various factors to be considered to buy a particular life insurance policy.

## COMPANY PROFILE

### HISTORY OF HDFC SLIC

### PRE INCORPORATION OF HDFC SLIC LTD

HDFC Standard Life Insurance Company Ltd. is one of India's leading private insurance

companies, which offers a range of individual and group insurance solutions.

HDFC and standard life first came together for a possible joint venture. To enter the life insurance market, in January 1995. In October 1995 the companies signed a 3 year joint venture agreement. It is a joint venture between Housing Development Finance Corporation Limited (HDFC Ltd.), India's leading housing finance institution and a Group Company of the Standard Life, UK. Around this time standard life purchased a 5% stake in HDFC. In October 1998, the joint venture agreement was renewed and additional resources made available.

Toward the end of 1999, the opening of the market looked very promising and the both companies agreed the time was right to move the operation to the next level. Therefore, in January 2000 an expert team from UK joined a hand picked team from HDFC to form the core project team, based on Mumbai.

### **NEED FOR THE STUDY**

- ✓ This study will help the company to understand the investor's preferences.
- ✓ This study also helps the company to find the satisfaction level of the investors, which helps the company to know its position.

- ✓ This study gives an output, which helps the company to improve\to check the attributes of the company.
- ✓ This study helps to identify vital attributes, which require special care.
- ✓ This study also gives the relative weights of the attributes, which the investors are looking for.

### **SCOPE OF THE STUDY**

- ✓ This study will attempt to find out investors preferences for various product in HDFC SLIC.
- ✓ This study will reveal the expectations of investors about various insurance products.
- ✓ The study will focus Chennai city only also the preferences, choice etc of investors.
- ✓ This research is for the investors who are interested to invest in life insurance products.

### **OBJECTIVES OF THE STUDY**

To find the attributes of the product that the customer is looking for.

- To study the impact of demographic factors in investment behavior of respondents.
- To identify preferred product among various products.
- To identify the customer satisfaction level of HDFCSLIC.
- To identify the risk bearing capacity of the customers.



➤ To study the level of awareness of investors.

## **RESEARCH METHODOLOGY**

### **RESEARCH PROBLEM**

In this research work, the main purpose is to study the various methods of creating investment awareness to the customers.

### **SOURCES OF DATA**

Primary data required for the study were collected by circulating the questionnaire among the individual investors who are investing in life insurance products of HDFC SLIC mogappaire only. Secondary data needed for conducting this research work were collected from various sources like books, websites, company records etc.

### **TOOLS AND TECHNIQUES**

✓ Weighted average method.

✓ Chi-Square Test

### **SAMPLING DESIGN**

A sample that relies on convenience method somewhere in the element selection process and therefore prohibits estimating the probability that any population element will be included in the sample.

### **SAMPLE SIZE**

The sample size for the project is 213 considering the time and cost factors. Final

draft of questionnaire is made after making the pilot study among the 20 respondents.

### **AREA OF SURVEY**

Population is the set of convenient and potential investors selected from HDFC SLIC mogappaire.

### **LIMITATIONS OF THE STUDY**

✓ The study covers only the insurance investors in HDFC SLIC so it may not explain with rest of the investors of other companies.

✓ The sample size is limited to only 213 investors it may not be generalized for total investors.

✓ The study was restricted to few individual customers only.

✓ The time span of the study was very limited for the data collection. Because for meeting each individual respondent the researcher had to fix an appointment in very advance, it was a time consuming process.

✓ There may have perceptual bias while collecting the primary data from the respondents.

✓ The project is conducted during the period of January 2010 to April 2010. So this project explains about the investor's preferences only during the period.

## REVIEW OF LITERATURE

There is a considerable volume of literature on various products in insurance as well as the use of various optimization techniques in insurance policies. In fact, optimization techniques have in some way always formed the backbone of the insurance policy selection by customers – it is like any portfolio selection problem. In that sense, even the seminal work of Markowitz (1952) on portfolio theory can be extended and applied to the insurance domain. However, not much work has been done, in particular, using LGPM in the life insurance industry. But some parallels can be drawn from similar (not identical) work that has been done in the banking sphere, especially in the Asset Liability Management (ALM) sphere (Bessis (2002)).

In terms of the insurance domain, Basu et al. (2004) discuss the use of different operational research and management science models in

various insurance applications. Das and Basu (2003) also have used an optimization technique to obtain the optimal premium in the case of automobile insurance in the presence of non-claims bonus schemes. Das (2003) has also used a similar approach to look at joint life insurance policies with differential benefits and premiums to policy holders.

The Analytic Hierarchy Process (AHP), developed by Satty (1980) and Aczel and Satty (1983) provides a method of obtaining the relative criticality weighting of child indicators and relative criticality weighting of evaluators.

### Statistical tests and Interpretation

#### TOOL 1-CANONICAL CORRELATION

**AIM:** To set the correlation measures of association between the age of the respondents and Good customer service, online payment, Renegotiation of term/incurred amount, Bonus, Add-ons special scheme.

Tests of Equality of Group Means					
	Wilks' Lambda	F	df1	df2	Sig.
Good customer service	1.000	.026	2	208	.974
Online payment	.994	.638	2	208	.529
Renegotiation of term/incurred amount	.999	.081	2	208	.922
Bonus	.997	.261	2	208	.771
Add-ons special scheme	.997	.323	2	208	.724

**Pooled Within-Groups Matrices**

	Good customer service	Online payment	Renegotiation of term/incurred amount
Correlation Good customer service	1.000	.215	-.263
Online payment	.215	1.000	.286
Renegotiation of term/incurred amount	-.263	.286	1.000
Bonus	-.072	-.196	.037
Add-ons special scheme	-.237	-.197	-.067

**Pooled Within-Groups Matrices**

	Bonus	Add-ons special scheme
Correlation Good customer service	-.072	-.237
Online payment	-.196	-.197
Renegotiation of term/incurred amount	.037	-.067
Bonus	1.000	.484
Add-ons special scheme	.484	1.000

**Analysis 1**

**Box's Test of Equality of Covariance Matrices**

<b>Log Determinants</b>		
Age	Rank	Log Determinant
Below 25	5	3.490
25-30	5	3.624
Above 30	5	2.618
Pooled within-groups	5	3.615
The ranks and natural logarithms of determinants printed are those of the group covariance matrices.		

Test Results		
Box's M		40.185
F	Approx.	1.238
	df1	30
	df2	12575.108
	Sig.	.173
Tests null hypothesis of equal population covariance matrices.		

### Summary of Canonical Discriminant Functions

#### Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.016 <sup>a</sup>	88.5	88.5	.127
2	.002 <sup>a</sup>	11.5	100.0	.046

a. First 2 canonical discriminant functions were used in the analysis.

#### Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1 through 2	.982	3.769	10	.957
2	.998	.435	4	.979

#### Standardized Canonical Discriminant Function Coefficients

	Function	
	1	2
Good customer service	-.173	.619
Online payment	.797	.063
Renegotiation of term/incurred amount	-.371	.565
Bonus	-.512	.416
Add-ons special scheme	.728	.541

**Structure matrix**

	Function	
	1	2
Online payment	.610*	.170
Bonus	-.317	.642*
Add-ons special scheme	.390	.546*
Renegotiation of term/incurred amount	-.165	.398*
Good customer service	-.039	.326*

Pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions

Variables ordered by absolute size of correlation within function.

\*. Largest absolute correlation between each variable and any discriminant function

**Result:**

**Canonical Discriminant Function Coefficients**

	Function	
	1	2
Good customer service	-.131	.468
Online payment	.469	.037
Renegotiation of term/incurred amount	-.252	.384
Bonus	-.326	.265
Add-ons special scheme	.445	.331
(Constant)	-.789	-6.872

Unstandardized coefficients

**Functions at Group Centroids**

Age	Function	
	1	2
Below 25	.053	.018
25-30	-.306	.001
Above 30	.050	-.133

Unstandardized canonical discriminant functions evaluated at group means

**INTERPRETATION**

From the table, it result that online payment and Add-ons special scheme are positively correlated with age group of below 25. Moreover Good customer service Renegotiation of term/incurred amount, Bonus, online payment and Add-ons special scheme are positively correlated with the age group of 2

**AIM:** To set the significant difference between Age of the respondents with Benefits on survival

**H0:** There is no significant difference between Age of the respondents and Benefits on survival.

**H1:** There is significant difference between Age of the respondents and Benefits on survival

**TOOL 2-CHI-SQUARE TEST**

Age of the respondents * Benefits on survival Crosstabulation					
Count		Benefits on survival			
		Not at all important	Not very important	Not important	Neither important nor not important
Age of the	20-35	4	8	28	51



respondents	35-50	2	2	3	9
	50-65	1	2	1	10
Total		7	12	32	70

Age of the respondents * Benefits on survival Crosstabulation					
Count					
		Benefits on survival			Total
		Important	Highly important	Extremely important	
Age of the respondents	20-35	24	32	12	159
	35-50	8	6	1	31
	50-65	3	4	2	23
Total		35	42	15	213

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.691 <sup>a</sup>	12	.729
Likelihood Ratio	9.042	12	.699
Linear-by-Linear Association	.060	1	.807
N of Valid Cases	213		

a. 10 cells (47.6%) have expected count less than 5. The minimum expected count is .76.

Calculated value = 8.69

Degree of Freedom is 6

Level of significance is 5% and confidence limit is 95%

Tabulated value of chi-square = 21.026

Calculated value < tabulated value

## RESULT

The table value of chi-square contribution of 5% level of significance at 6 degree of freedom is 21.026. The calculate value of chi-square (Pearson) is 8.69.

H0 is accepted.

## INTERPRETATION

From the results, it can be concluded that the chi-square test reveals that there is no significant difference between Age of the respondents and Benefits on survival factor considered while buying insurance at the significance level of 5%.

### TOOL 3-CLUSTER ANALYSIS

**AIM :** To identify different clusters among the categorical variables designation & department with the continuous variables age, experience, workplace atmosphere and feel about the labour turnover

#### Interpretation

The above chart infers that there are seven clusters identified from the analysis in which

first cluster having 25% of the respondents, second cluster with 14% of the respondents , third cluster with 14% of the respondents, fourth cluster with 13% , fifth cluster with 13% , sixth cluster with 11% and seventh cluster with 10% among the variables considered in buying an insurance policy.

### TOOL 4-CORRELATION

**AIM:** To identify the correlation between (a) the Gender of the respondents and Sum assured (b) the gender of the respondents and Surrender charges

**Descriptive Statistics**

	Mean	Std. Deviation	N
Gender	1.35	.479	213
Sum assured	4.31	1.513	213
Surrender charges	4.50	1.379	213

**Correlations**

		Gender	Sum assured	Surrender charges
Gender	Pearson Correlation	1	-.019	.074
	Sig. (2-tailed)		.785	.284
	Sum of Squares and Cross-products	48.592	-2.887	10.324
	Covariance	.229	-.014	.049
	N	213	213	213

Sum assured	Pearson Correlation	-.019	1	.333**
	Sig. (2-tailed)	.785		.000
	Sum of Squares and Cross-products	-2.887	485.164	147.347
	Covariance	-.014	2.289	.695
	N	213	213	213
Surrender charges	Pearson Correlation	.074	.333**	1
	Sig. (2-tailed)	.284	.000	
	Sum of Squares and Cross-products	10.324	147.347	403.249
	Covariance	.049	.695	1.902
	N	213	213	213

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Result:**  $r = -.019$  clearly indicates that there is a negative correlation between the gender of the respondents and sum assured whereas the surrender charges is positively correlated with the gender of the respondents i.e.,  $r = .074$ .

## FINDINGS

- Majority of the respondents are under age group above 20-35.
- Most of the respondents 65% are male.
- Majority of the respondents 56% are married.
- 41% of respondents income level is <10000.
- Majority of the respondents are self-employed.
- Majority of the <10000 and 10000-20000 income group and marital status group of the respondents says that low premium is important factor influencing their decision to buy a particular life insurance policy.

- Marital status group and 10000—20000, 20000—30000 and >30000 income group of respondents says that availability of riders is neutral factor influencing to buy an insurance policy.
- Gender group and marital status group of respondents says that critical illness benefits are important factor influencing their decision to buy an insurance policy.
- Gender group, marital status group and <10000, 10000-20000 of income group of the respondents says that major surgical are important factor to be considered in buying an insurance policy.
- Gender group and student and executive, self-employed occupation group says that tenure is neither important nor not important factors influencing their buying decision a particular life insurance policy.

➤ Male of gender group and single marital status group says that returns is important factor influencing their buying decision of insurance. But female of gender group and married of marital status group says neutral regarding returns.

➤ Majority of the 10000-20000,20000-30000 and >30000 income group and student, self-employed of occupation group says that switching facilities is neutral factors influencing their buying decision a particular life insurance policy.

➤ Gender group, student and occupation group says that lock in period is neither important nor not important factors influencing their buying decision a particular life insurance policy.

➤ Gender group and marital status group of respondents says that sum assured is Neither important nor not important factor influencing their buying decision on insurance policy.

➤ 10000-20000, 20000-30000 of income group and occupation group says that surrender charges of important factors influencing their buying decision a particular life insurance policy.

➤ Income group and student, executive and self -employed of occupation group says that premium allocation of neutral factors

influencing their buying decision a particular life insurance policy.

➤ 10000-20000, 20000-30000 of income group says that short term policy of important factors influencing their buying decision a particular life insurance policy.

### **SUGGESTIONS**

➤ It is suggested that in order to take more customers in their fold, the company should concentrate more in on-line payment, renegotiation of term/ incurred amount, tenure, policy renewal and switching facilities.

➤ The company may explore the possibility of reducing the premiums charged mainly to increase their business by overcoming competition.

➤ The company should also concentrate in popularizing their premium allocation and special schemes.

### **CONCLUSION**

The study is undertaken mainly to elicit the preference of customers about life insurance products particularly with reference to HDFC Standard Life insurance company limited. The analysis of the study reveals that majority of the customers prefer insurance as getting benefits on death and safety. In addition to this, the reputation of the company, the bonus paid and advertisement mode plays an important



role in motivating the customers to take insurance as a plan of investment. While there is a great scope for investment in this area but however if the company further concentrates in extending the advertisement and reduction of premium etc then the company can become a number one company in the insurance industry.

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