An Empirical Study of the Factors Influencing Customer Buying Behaviour in LI Industry

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In the field of marketing management, the idea of the marketing mix is crucial for analysing how well a company's product and service marketing campaigns are working. This study aims to investigate the three Ps of marketing mix, namely Product, Price, and Promotion, and their relative effects on the efficacy of marketing programs. The Long-Term Income Plan (LTIP) is the product of choice for this study, and the company is a life insurance company located in Navi, Mumbai. The Literature Review contains a list of the variables related to the product, price, and promotion as well as the marketing program. You can find a list of the marketing program factors as well as the pricing, promotion, and product variables in the literature review. In the area of life insurance Company marketing, the research gap suggested that the connection between these two ideas needs to be investigated. This study's goals are to identify the aspects of Product, Price, and Promotion that affect the marketing of Long-Term Income Plans (LTIPs) and to look into the connection between the success of marketing campaigns and the factors of Product and Price that are being studied. One hundred fifty responders in Navi, Mumbai, have been given a questionnaire.

Keywords: Long Term Income Plan (LTIP), Insurance Sector, Consumer behaviour, Awareness etc.

1. Introduction

Due to confidentiality issues and unavailability of NOC from the company, the name of the company, chosen for this research, cannot be disclosed in this study. The chosen Life Insurance Company is located in Navi, Mumbai and Branches over 140. It provides various policies but I have chosen its best policy so that the data could be accurate and we can understand consumer behaviour towards Long Term Income Plans (LTIP).

Brief About Insurance Sector in India:

India's insurance market is booming. This is because people are earning more money and understand the importance of insurance better. India is a major player in the global insurance world, offering many new, exciting insurance products due to strong competition. The government welcomes some foreign investment, and there's a special organization (IRDAI) that oversees the industry. There are lots of insurance companies in India. Some provide life insurance; others focus on things like property or health insurance. The government runs a few of these companies. Besides the companies, agents, brokers, and other professionals help the industry work smoothly. The insurance industry has seen big changes in 2022. New rules, technologies, and ways of doing business are opening up the market. The main government group in charge of insurance (IRDAI) is focused on making sure insurance is available to everyone by 2047.Important government programs and a strong business environment help the insurance industry grow. Traditionally, people bought insurance from agents or banks, but now it's easier than ever to do it online. The Covid-19 pandemic has also made people see how important insurance is for financial safety. The Indian insurance industry has shown impressive growth in recent years, driven by a number of factors. These include increased participation from private companies, improved distribution channels, and greater operational efficiency. The insurance penetration rate in India is still relatively low, but it is expected to grow in the coming years. This growth is likely to be driven by factors such as rising disposable incomes, increasing awareness of the benefits of insurance, and government initiatives to promote financial inclusion. Overall, the Indian insurance industry is on a positive growth trajectory.

Why this study is important:

People have different ways of investing their money. Insurance is especially tricky because there are so many things that influence why someone buys a policy. Many people who could benefit from insurance don't know which plan is right for them. We all want our families to be financially secure, but some people are hesitant to talk to insurance agents and don't end up buying a policy. Others buy insurance just to save on taxes. This study aims to figure out how people in India make decisions about life insurance.

2. Literature Review

The Indian life insurance market has been the subject of much research aimed at understanding consumer preferences. In recent

decades, a growing body of research has explored the complex interplay of socio-economic and demographic factors that influence individuals' decisions to purchase life insurance. This analysis will delve into recent studies that specifically examine how these characteristics shape life insurance demand within India.

A comprehensive review of the literature by Seitz (2003) identified several key determinants of life insurance demand that are relevant for the Indian market. These include age, income level, educational attainment, marital status, family size, and occupation. Higher income, education, and family size were found to be positively correlated with a greater likelihood of purchasing life insurance. Conversely, factors like premium costs and the existence of alternative social security programs were linked to a decrease in demand. It's important to note that Seitz also highlighted inconsistencies in the impact of certain determinants, such as age and family size, across various studies.

Studies conducted within India, such as that of Arun et al. (2012), have established a positive correlation between participation in micro-life insurance schemes and the number of dependents within a household, suggesting a potential "bequest motive." Furthermore, research by Bola and Verma (2007) revealed distinct characteristics of policyholders and product preferences in rural India. Middle-aged individuals dominate this market segment, with insurance agents playing a crucial role as advisors. Money-back and endowment policies emerged as the most popular choices in rural areas.

Guru and Maheshwari's research (2018, 2019) emphasized the significance of service quality, company reputation, product innovation, and accessibility in shaping consumer perceptions of private life insurance in India. Their findings highlight the importance for insurers to understand these factors and leverage them to develop novel products that cater to the evolving needs of Indian consumers.

It's also valuable to acknowledge other research that explores the connections between education levels and insurance awareness (Truett & Truett, 1990), income's influence on insurance consumption patterns (Enzi, 2000), and the potential for cultural factors to have little to no effect on insurance demand (Eshoo et al., 2002). Studies like that of Tajuddin et al. (2009) demonstrate how education, age, and income can impact attitudes towards insurance within other countries, offering valuable insights that may be applicable to the Indian market as well.

Emphasize the Need for Deeper Understanding

- A deeper understanding of consumer behaviour regarding Long Term Income Plans (LTIPs) is needed, as this area remains relatively unexplored.

3. Research Methodology

Objective 1

This study aims to identify areas for improvement within an insurance company by conducting a thorough review of existing literature. The following methodological approach outlines the steps taken to achieve this objective.

Understanding the Problem

The first stage of this research involved clearly defining the study's objectives. Based on a review of relevant literature, research questions and aims were formulated, leading to the development of a tailored research plan.

Methodology for the Objective

Research Approach:

A research design provides a structured plan for obtaining the information needed to address research questions. This study employs a descriptive research approach for the following reasons:

- **Descriptive Research:** A descriptive design aims to characterize a particular population or phenomenon. It does not delve into the how, when, or why of a situation, yet it remains crucial for thoroughly investigating a problem.
- **Clear Objectives:** This study has well-defined objectives, and descriptive research allows for a comprehensive exploration of all facets relevant to the problem at hand.

Measurement and Scaling

To analyse customer attitudes, this study utilizes Likert scales. Respondents indicate their level of agreement with various statements using a numerical rating system (e.g., 1 to 5). The cumulative score represents an individual's overall attitude. This measurement tool is ideal for investigating customer buying behaviour toward Long Term Income Plans (LTIPs) as it captures nuanced opinions and preferences.

Defining the Study Population and Sample

This study focused on current and potential customers of Long-Term Income Plans (LTIPs) in Navi Mumbai who have either purchased the product from the selected insurance company or expressed an interest in doing so. The sampling frame consisted of a comprehensive list of Long-Term Income Plans (LTIP) buyers from this company.

To obtain a representative sample, we first identified the total population of Long-Term Income Plans (LTIP) buyers in Navi Mumbai. Based on a survey, we then collected responses from approximately 150 individuals within this group.

We can express the multiple regression model mathematically using the following equation: $Y = \alpha + \beta 1F1 + \beta 2F2 + \beta 3F3 + ... + \beta kFk$

Key Terms

- Y: The dependent variable (the outcome we're trying to predict)
- α: The intercept (the value of Y when all independent variables are zero)
- F1, F2, F3, …... Fk: Independent variables (factors influencing the outcome). Note: "F" is used after factor analysis for clarity.
- B1, β2, β3, ……. βk: Coefficients (representing the strength and direction of the relationship between each independent variable and the dependent variable).

Hypothesis Testing

Individual coefficients (β)

- Null hypothesis (H0): βi = 0 (The independent variable Fi has no significant impact on Y)
- Alternative hypothesis (H1): βi ≠ 0 (The independent variable Fi significantly affects Y)
- Overall regression model (ANOVA):
- Null hypothesis (H0): All coefficients are zero (none of the independent variables influence Y)
- Alternative hypothesis (H1): At least one coefficient is non-zero (at least one independent variable has a significant impact on Y)

Additional Concepts

- Coefficient of Multiple Determination (R^2): A statistical measure that represents the proportion of variance in the dependent variable (Y) that can be attributed to the independent variables in the model. In simpler terms, it reflects how well the regression model fits the data. A higher R^2 value indicates a stronger relationship between the independent variables and the dependent variable.
- t-value: Used to determine the statistical significance of each independent variable.
- Standard Error of a Regression Coefficient: Reflects the degree of uncertainty in estimating the true value of a coefficient.

4. Analysis of Data

This study's methodology outlines the research techniques employed. Before analysis, we ensured that all parameters, definitions, and variables were accurate, free of errors, and formatted appropriately. Our analysis focused on the study's objectives and the chosen methodology. We examined data related to specific sectors, aiming to provide valuable insights, draw conclusions, and support decision-making processes.

You'll find statistical tables presented sequentially in this chapter. Stepwise regression models are incorporated here, with complete tables available in a subsequent section. To ensure reliable results, we adhered to the guideline of having at least five responses per variable (Malhotra & Dash, 2009). The required minimum response breakdown is shown in Table 1.

Table 1. *Minimum Responses Required for Factor Analysis*

Analysis	Number of metric variables	Minimum number of responses required (Numberof Variables*5) (Malhotra & Dash,2009)
Purchasing Decision of the Long-Term Income Plan (LTIP)	10	50
Total	10	50

Assessing Questionnaire Consistency

We conducted a reliability analysis to ensure the survey questionnaire produced consistent results. This analysis involved calculating Cronbach's alpha, a statistical measure of internal reliability. Table 3 summarizes the findings.

Table 2. *Cronbach's Alpha Score*

Reliability Statistics	
Cronbach's Alpha	N of Items
0.916	5

Cronbach's alpha is a coefficient commonly used to assess the internal consistency of a survey instrument or test. It ranges in value from 0 to 1, with higher values indicating greater reliability. A rule of thumb suggests that a Cronbach's alpha below 0.6 might indicate that the survey questions are not effectively capturing the same underlying concept. In this case, the Cronbach's alpha of 0.916 signifies a strong level of internal consistency within the data. This means that the survey questions are likely measuring the intended variables in a consistent and reliable manner.

Objective 2:

To identify the specific factors that play a decisive role in influencing purchase decisions.

Exploratory Factor Analysis

Step One: Defining Variables
Based on the questionnaire the following variables are analysed:
F1: Recognizing a need or problem that influences a purchase decision.
F2: The process of collecting product information during decision-making.
F3: Evaluating different options and choosing the optimal one.
F4: The act of completing the purchase.
F5: Reflecting on the purchase and evaluating the product afterward.

Step Two: Statistical Assessment
Chi-Square Value: A chi-square value of 1107.345, significant at the 0.05 level, confirms that the data is suitable for factor analysis. This test indicates a correlation between the variables.
KMO Measure: The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy yielded a value of 0.884. Since this value falls within the recommended range (0.5 to 1.0), it confirms the appropriateness of factor analysis for this dataset.

Table 3. *KMO and Bartlett's Test*

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.884
Bartlett's Test ofSphericity	Approx. Chi-Square	1107.345
	Degree of freedom (df)	10
	Sig.	0.000

Step Three: Employing Principal Component Analysis (PCA)
This factor analysis utilizes the Principal Components method (PCA), a technique that focuses on explaining the total variance within the dataset. PCA is ideal when the central goal is to identify the fewest number of factors that can account for the most significant portion of the data's variability. This approach is highly useful for preparing data for subsequent multivariate analysis (Malhotra & Dash, 2009).

Table 4. *Total Variance Explained*

Component	**Initial Eigenvalues**			**Extraction Sums of Squared Loadings**		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.750	75.001	75.001	3.750	75.001	75.001
2	.459	9.180	84.181	.459	9.180	84.181
3	.314	6.285	90.466			
4	.285	5.691	96.158			
5	.192	3.842	100.000			

Table 5. *Varimax Rotated Compound Matrix*

Name of the Variable	**Component**	
	1	2
F1	0.883	0.229
F2	0.823	0.397
F3	0.693	0.580
F4	0.734	0.486
F5	0.314	0.924

Factor Extraction and Rotation: Informed by insights from existing literature, we anticipated the presence of a specific number of factors. To simplify the analysis, we used SPSS to extract this predetermined number of factors. This approach is known as the priori determination approach (Malhotra & Dash, 2009).

Step Four: Applying Varimax Rotation
Table 6 presents the Varimax rotation matrix. We employed the Varimax technique for its ability to simplify factor interpretation. This method minimizes the number of variables with high loadings on any single factor.

Step Five: Understanding the Factors
The following summarizes the results of the Varimax rotation

Table 6. *Summary table of Factors*

Need Analysis	Buying Behaviour
Problem recognition	Post Purchase
Information search	
Alternative comparison	
Purchase	

Interpreting the Factors

Factor 1: Need Analysis

- Variables F1, F2, F3, and F4 exhibit the highest loadings on this factor. This suggests a strong emphasis on the initial needs assessment phase of the Long-Term Income Plan (LTIP) decision-making process.

Factor 2: LTIP Purchasing Behaviour

- The remaining variables, which did not load as heavily on Factor 1, appear to reflect specific aspects of purchasing behaviour related to Long Term Income Plans (LTIPs).

Multiple Regression Analysis

We employed multiple regression analysis to explore the relationships between variables. The factors identified in our analysis (F1 and F2) served as independent variables. We aimed to predict a dependent variable (Y) using the following regression equation (Levin & Rubin, 2002):

$Y = \alpha + \beta 1F1 + \beta 2F2$

Terms

- Y: Mean value calculated from the variables "No. of Applicants", "No. of Hiring's", and "No. of Successful Placements"
- α: Intercept
- F1: Represents "Official Factors"
- F2: Represents "Other Factors"
- β1, β2: Coefficients signifying the strength of the relationship between each independent variable and the dependent variable

Hypothesis Testing (F-test):

- **Null Hypothesis (H0):** None of the independent variables (Fs) have a significant impact on the dependent variable (Y).
- **Alternate Hypothesis (H1):** At least one independent variable (F) significantly influences the dependent variable (Y).

Tables 7, 8, and 9 display the findings based on Model 1, which was the preferred model in our Stepwise Regression Analysis. These tables further illustrate the relationships between the variables.

Table 7. *Model Summary*

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.696[a]	.484	.482	.75467
2	.852[b]	.726	.724	.55126

Assessing the Regression Model

The coefficient of determination (R^2) is 0.724, indicating that our regression model explains a significant portion (72.4%) of the variation observed in Long Term Income Plan (LTIP) purchase decisions. An ideal R^2 value falls between 0 and 1. This high R^2 suggests a powerful relationship between the independent factors and the decision to purchase an LTIP. We can attribute this strong association to the following:

- All variables included in the study have been found to be statistically significant within the regression model.
- The high R^2 value implies that the chosen variables adequately address the key influences on purchasing behaviour.

Analysis of Variance (ANOVA)

The ANOVA table (shown below) assesses how well the regression equation predicts the dependent variable. It provides further evidence of the model's suitability.

Table 8. *Annova*

ANNOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	168.805	1	168.805	296.395	.000[b]

	Residual	179.971	316	.570		
	Total	348.776	317			
2	Regression	253.052	2	126.526	416.357	.000[c]
	Residual	95.725	315	.304		
	Total	348.776	317			

The ANOVA table provides strong evidence that our regression model effectively predicts the dependent variable. The "Sig." column in the "Regression" row displays a p-value less than 0.0005. This value, being significantly smaller than the **standard 0.05** threshold, indicates that our model is statistically significant. In other words, it's highly unlikely that the observed relationship between the independent variables and the dependent variable occurred by chance. This supports the conclusion that the model is a good fit for the data.

Table 9. *Regression Coefficient*

Regression Coefficients						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**T**	**Sig.**
		B	Std. Error	Beta		
1	(Constant)	2.939	0.042		69.447	0.000
	REGR factor score 2 for analysis 1	0.730	0.042	.696	17.216	0.000
2	(Constant)	2.939	0.031		95.073	0.000
	REGR factor score 2 for analysis 1	0.730	0.031	.696	23.569	0.000
	REGR factor score 1 for analysis 1	.516	.031	.491	16.650	0.000

Key Findings from Multiple Regression

Our multiple regression analysis revealed that both Factor 1 (composed of variables F1, F2, F3, and F4) and Factor 2 (composed of variable F5) significantly influence purchase decisions. The regression equation is:

Y (Mean Purchase Decision) = 0.477 + 0.486(F5) + 0.237(F4) + 0.088(F1)

Based on these results, we reject the null hypothesis and conclude that F1 and F2 significantly impact purchase decisions.

Model Evaluation

The coefficient of determination (R^2) of 0.726 indicates that our model accounts for 72.6% of the variance in Long Term Income Plan (LTIP) purchase decisions. The F-ratio of 416.357, being statistically significant, further strengthens the validity of our regression model. While the R^2 value suggests a good fit, there might be potential for incorporating additional variables to further improve the explanatory power of the model.

5. Conclusion

Factors Influencing LTIP Purchase Decisions: Our exploratory factor analysis identified two primary factors driving Long Term Income Plan (LTIP) purchase decisions: need recognition and buying behaviour. Consumers considering LTIPs appear to place significant emphasis on cultural, social, psychological, and personal factors. These two key factors, need recognition and buying behaviour, play a pivotal role in the decision-making process for Long Term Income Plans.

6. Study Limitations

It's important to acknowledge the following limitations of this research:

- **Scope:** We did not conduct a comparative analysis with other studies or types of insurance products. This limits the ability to directly compare our findings to broader trends in the insurance market.
- **Data Verification:** Responses were recorded using a Likert scale, which relies on self-reporting. We assumed the data was provided accurately, but we had no way to independently verify responses.
- **Generalizability:** The sample size and its specific characteristics may limit the ability to generalize the results to a wider population.
- **Questionnaire Design:** We used a broad questionnaire focused on Long Term Income Plan (LTIP) purchase decisions. This may not capture the full range of factors influencing decision-making for all potential buyers of Long-Term Income Plans (LTIP).

7. Appendix

QUESTONNAIRE

Full Name:
Email id:
Contact Number:

On a scale of (1) Strongly Disagree (2) Disagree (3) Neutral (4) Agree (5) Strongly Agree					
1) Need Recognition: You are well aware of need for insurance and Long-Term Insurance Plan (LTIP) will only serve the purpose.	1	2	3	4	5
2) Information Search: While making a purchase decision in Long Term Insurance Plan (LTIP) you care to search for all the benefits each term and conditions associated with it.	1	2	3	4	5
3) Gathering of alternatives and selection: While making a choice to make a purchase in Long Term Insurance Plan (LTIP) you inspect the policy on the basis of the benefits and compare it with all the other alternatives.	1	2	3	4	5
4) Purchase Decision: Your purchase decision of Long-Term Insurance Plan (LTIP) depends upon the death benefits, survival benefits, policy term base sum assured, Premium paying term, loan facility and assignment feature.	1	2	3	4	5
5) Post Purchase decision: You evaluate the policy after purchase on the basis of its perceived benefits and minimum desired expectations to decide your satisfaction and dissatisfaction.	1	2	3	4	5
6) Influenced by reference group (social factor): You would buy a LTIP if your friend owns it or refers you to buy.	1	2	3	4	5
7) Influenced by family and friends (social factor): Family members and relatives plays a crucial role while you plan to purchase Long Term Insurance Plan (LTIP)	1	2	3	4	5
8) Influenced by saving of income (personal factor): You buy a Long-Term Income Plan (LTIP) because you get tax rebates.	1	2	3	4	5
9) Influenced by personal factor: Your buying of Long-Term Income plan (LTIP) depends upon the premium paying f frequency (either monthly, quarterly, half yearly or annually)	1	2	3	4	5
10) Influenced by perception psychological factor: Your purchasing of Long-Term Income Plan (LTIP) depends upon the perception you create it through reviews of existing customers.	1	2	3	4	5

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