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A Study of Customer Engagement Techniques for online buying of Insurance by customers from Pune district: Pilot Study Report

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Abstract

This pilot study titled "A Study of Customer Engagement Techniques for Online buying of Insurance by customers from Pune district" explores the significance and effectiveness of customer engagement strategies in the online insurance sector. With the rapid growth of digital platforms and increasing preference for online insurance purchases, understanding customer engagement has become essential for insurers. The study aims to evaluate the importance of customer engagement, assess the impact of COVID-19 on online insurance sales, examine the effectiveness of existing engagement techniques, and identify areas for improvement.

The research adopts a pilot study design involving 100 respondents from Pune district who had purchased insurance online. Data was collected using a structured questionnaire based on a five-point Likert scale. Reliability testing using Cronbach's Alpha indicated strong internal consistency across all sections, confirming the suitability of the instrument for the main study.

The findings reveal that customer engagement is highly significant in influencing online insurance purchases. The study also confirms that COVID-19 has had a substantial positive impact on the adoption of online insurance. However, the results indicate that existing customer engagement techniques are largely ineffective in meeting customer expectations. At the same time, there is considerable scope for improving these techniques to enhance customer experience and satisfaction.

The pilot study validates the feasibility of the research methodology and highlights the need for insurers to redesign engagement strategies. Strengthening customer-centric approaches can improve trust, satisfaction, and overall growth in the online insurance market.

Keywords: *Customer Engagement, COVID-19 Impact, Consumer Behaviour, Customer Experience, Digital Marketing, Insurance Technology, Online Insurance*

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1. Introduction

Research entitled "*A study of Customer Engagement Techniques for online buying of Insurance by customers from Pune district*" was undertaken to analyze customer engagement techniques in the context of online insurance. The objectives of the study were:

- To study the significance of customer engagement in case of a product like online insurance
- To find out the customer engagement techniques that are being applied by companies selling online insurance

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- To find out the metrics used to evaluate the customer engagement techniques
- To assess the impact of COVID-19 on the sales of online insurance
- To find out if these techniques are effectively engaging customers of online insurance
- To find out how the existing techniques can be improved

Before the main study was undertaken a pilot study was conducted to get a feel of issues encountered in data collection, to test the usage of the questionnaire, to test the hypotheses as per research methodology, and to test validity and reliability of questionnaire prepared for primary data collection.

This report presents the results of the pilot study.

2. Methodology

2.1 Population

Mordor Intelligence (2023) has projected that around 75% of the total new insurance policies sold would be through online. It is therefore, easily estimated that the size of population of online insurance buyers from Pune should be a large one to the extent of 20,000[1].

2.2 Sample

As per Krejcie and Morgan (1970), at 95% confidence level and 5% confidence interval, sample size for a population of 20,000 comes to 377, which was rounded off to 400. The sample size of 400 takes care of a much larger population as the sample size doesn't change much after the threshold of 20,000. The selection criterion for the sample was that the insured must have purchased an insurance policy online at least one year before the survey[2].

2.3 Sampling unit and respondents

The sampling unit was the online insurance buyers.

2.4 Sampling method

Convenience and Snowball sampling methods were used considering the practical constraints.

For the pilot study, 100 respondents were selected as sample representing 25% of the main study sample.

2.5 Instrument for survey

A questionnaire was designed for the study. The questionnaire had four sections. Each section had ten statements and responses were sought on a 5-point Likert scale – Somewhat agree, strongly agree, neither agree nor disagree, somewhat agree, strongly disagree. The

Table 1. Cronbach Alpha scores

Sr. No.	Section	Number of statements	Cronbach Alpha score
1	I. Significance of Customer Engagement (CE) for online insurance	10	0.94
2	II. Impact of COVID-19 on the sales of online insurance	10	0.98
3	III. Effectiveness of existing customer engagement techniques	10	0.90
4	IV. Scope for improving existing customer engagement techniques	10	0.88
5	Entire questionnaire	40	0.74

Source: Developed by the author

questionnaire was tested for validity and reliability as under:

2.6 Test of validity

The instrument's face and content validity were validated by the guide and experts known to the researcher.

Test of reliability – Cronbach's Alpha test was applied on the questionnaire using "Siegle Reliability Calculator" an excel program. The Cronbach's alpha scores are given in a table.

As the Cronbach's alpha scores were more than 0.70, the questionnaire was considered as reliable.

Hypotheses formulation

The hypotheses formulation is presented below:

Ho1 – Customer engagement is not significant for a product like online insurance

Ha1 – Customer engagement is significant for a product like online insurance

Ho2 – There has been no impact of COVID-19 on the sales of online insurance

Ha2 – There has been an impact of COVID-19 on the sales of online insurance

Ho3 – Existing customer engagement techniques are effective

Ha3 - Existing customer engagement techniques are not effective

Ho4 – There is no scope for improving existing customer engagement techniques

Ha4 - There is a scope for improving existing customer engagement techniques

2.7 Scheme formed for testing of hypotheses

- A survey questionnaire was designed to collect primary data in order to test the hypotheses as stated earlier.
- The questionnaire was administered to online insurance buyers from Pune.
- The questionnaire had IV sections in addition to the profile section. Each section had ten statements.
- Responses to these statements were taken on 5-point Likert scale of agree/disagree.
- Average agreement/disagreement scores for each of the sections were calculated for all the 10 sub-responses under each of them for the 100 respondents.
- Weights of 2 were used to value extreme (strongly agree and strongly disagree) responses and distinguish them from moderate (somewhat agree and somewhat disagree) responses which were valued at 1.
- Using these weights two summations were derived for each statement adding the strongly agree and somewhat agree responses and somewhat disagree and strongly disagree responses.
- Based on the summations, percentages of agreement and disagreement were worked out for each of the statement.
- Using a t-test, the higher average agreement/disagreement scores (average of 10 sub-responses) were compared with a hypothesized population mean of 50% agreement/disagreement, connoting an event by chance.
- A t-test was used since the standard deviation of the population was unknown (Had the standard deviation of the population been known a Z-test would have been used).
- P-values were calculated and the null hypotheses were tested for rejection or non-rejection at 95% confidence level.

3. Data Analysis

3.1 Descriptive Analysis – Profile of the Sample

3.2 Inferential Analysis (Testing of Hypotheses)

Ho1 – Customer engagement is not significant for a product like online insurance

Table 2. Profile of sample for pilot study (n=100)

Variable	Category	Count	%
Gender	Male	52	52
	Female	48	48
Age of employee	<30 years	30	30
	30-39 years	17	17
	40-49 years	28	28
	>=50 years	25	25
Educational qualification	Graduate	32	32
	PG	33	33
	Professional	33	33
	Others	2	2
Type of insurance purchased online last	Life	36	36
	General	28	28
	Both	38	38
Was the purchase pre or post COVID?	Pre-COVID	41	41
	Post-COVID	59	59
Range of insurance policy amount	<Rs.5 lacs	41	41
	Rs.5-50 lacs	27	27
	>Rs.50 lacs	32	32
Source of information about online insurance	Print advertisement	24	24
	TV advertisement	21	21
	Word-of-mouth	20	20
	Social media	14	14
	Others	21	21
Most important reason for buying online insurance	Safety	37	37
	Tax benefit	33	33
	Both	30	30

Source: Developed by the author

Table 3. Summary of responses to Section I of the questionnaire

Qstn.	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	1.10	Average
Agree %	76%	82%	75%	70%	81%	75%	78%	69%	88%	86%	78%

Source: Developed by the author

Table 4. Testing of H1

Parameter	Value
Average = Ho (Sample mean)	78%
SD (Standard Deviation of sample)	1.31
H1 (Hypothesized mean of population)	50%
n (Sample Size)	100
t-value (Ho-H1) / ((SD) / √n)	2.14
p-value	0.02

Source: Developed by the author

Ha1 – Customer engagement is significant for a product like online insurance

The hypothesis was tested based on average responses to Section I of the questionnaire. Summary of the average responses to the ten statements of the said section is given.

The average agreement of the sample was compared with a hypothesized population mean of 50% agreement connoting an event by chance using a t-test and the results are given.

Since, the p-value of 0.02 is <0.05, the null hypothesis, customer engagement is not significant for a product like online insurance, was rejected in favor of its alternate, customer engagement is significant for a product like online insurance.

Ho2 – There has been no impact of COVID-19 on the sales of online insurance

Ha2 – There has been an impact of COVID-19 on the sales of online insurance

The hypothesis was tested based on average responses to Section II of the questionnaire. Summary of the average responses to the ten statements of the said section is given.

The average agreement of the sample was compared with a hypothesized population mean of 50% agreement connoting an event by chance using a t-test and the results are given.

Since, the p-value of 0.002 is <0.05, the null hypothesis, there has been no impact of COVID-19 on the sales of online insurance, was rejected in favor of its alternate, there has been an impact of COVID-19 on the sales of online insurance.

Ho3 – Existing customer engagement techniques are effective

Ha3 - Existing customer engagement techniques are not effective

The hypothesis was tested based on average responses to Section III of the questionnaire. Summary of the average responses to the ten statements of the said section is given.

Table 5. Summary of responses to Section II of the questionnaire

Qstn.	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	Average
Agree %	83%	84%	81%	86%	91%	82%	82%	83%	86%	86%	84%

Source: Developed by the author

Table 6. Testing of H2

Parameter	Value
Average = Ho (Sample mean)	84%
SD (Standard Deviation of sample)	1.21
H1 (Hypothesized mean of population)	50%
n (Sample Size)	100
t-value (Ho-H1) / ((SD) / √n)	2.84
p-value	0.002

Source: Developed by the author

Table 7. Summary of responses to Section III of the questionnaire

Qstn.	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	3.10	Average
Disagree %	71%	79%	68%	71%	78%	74%	68%	74%	80%	74%	74%

Source: Developed by the author

Table 8. Testing of H3

Parameter	Value
Average = Ho (Sample mean)	74%
SD (Standard Deviation of sample)	1.29
H1 (Hypothesized mean of population)	50%
n (Sample Size)	100
t-value (Ho-H1) / ((SD) / √n)	1.84
p-value	0.03

Source: Developed by the author

The hypothesis was tested based on average responses to Section IV of the questionnaire. Summary of the average responses to the ten statements of the said section is given.

The average agreement of the sample was compared with a hypothesized population mean of 50% agreement connoting an event by chance using a t-test and the results are given.

Since, the p-value of 0.003 is <0.05, the null hypothesis, there is no scope for improving existing customer engagement techniques, was rejected in favor of its alternate, there is a scope for improving existing customer engagement techniques.

Table 9. Summary of responses to Section IV of the questionnaire

Qstn.	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	4.10	Average
Agree%	78%	86%	89%	81%	74%	73%	93%	91%	85%	88%	84%

Source: Developed by the author

The average disagreement of the sample was compared with a hypothesized population mean of 50% disagreement connoting an event by chance using a t-test and the results are given.

Since, the p-value of 0.03 is <0.05, the null hypothesis, existing customer engagement techniques are effective, was rejected in favor of its alternate, existing customer engagement techniques are not effective.

Ho4 – There is no scope for improving existing customer engagement techniques

Ha4 - There is a scope for improving existing customer engagement techniques

Table 10. Testing of H4

Parameter	Value
Average = Ho (Sample mean)	84%
SD (Standard Deviation of sample)	1.23
H1 (Hypothesized mean of population)	50%
n (Sample Size)	100
t-value (Ho-H1) / ((SD) / √n)	2.76
p-value	0.003

Source: Developed by the author

3.3 Summary of inferential analysis

Summary of the testing of all the six hypotheses along with their interpretation is given.

Table 11. Summary of inferential analysis

Sr. No.	Data Analysis	Actual Outcome	Interpretation
1	Significance of customer engagement for online insurance	Average agreement for Section I 78% and p-value 0.020	As the mean score of the sample and the hypothesized population mean differ significantly as indicated by p-value, rejected the null hypothesis, customer engagement is not significant for a product like online insurance.
2	Impact of COVID-19 on the sales of online insurance	Average agreement for Section II 84% and p-value 0.003	As the mean score of the sample and the hypothesized population mean differ significantly as indicated by p-value, rejected the null hypothesis, there has been no impact of COVID-19 on the sales of online insurance.
3	Effectiveness of existing customer engagement techniques	Average disagreement for Section II 74% and p-value 0.03	As the mean score of the sample and the hypothesized population mean differ significantly as indicated by p-value, rejected the null hypothesis, existing customer engagement techniques are effective.
4	Scope for improving existing customer engagement techniques	Average agreement to section IV 84% and p-value 0.003	As the mean score of the sample and the hypothesized population mean differ significantly as indicated by p-value, rejected the null hypothesis, there is no scope for improving existing customer engagement techniques.

Source: Developed by the author

4. Conclusions

- Customer engagement is significant for a product like online insurance. There has been an impact of COVID-19 on the sales of online insurance. Existing customer engagement techniques are not effective. There is a scope for improving existing customer engagement techniques
- From the pilot study, we got these results:

  a) Collecting data is doable with some ease.

b) It is possible to change the data into variables needed for analysis.

c) We can test the hypotheses using the research methods.

- The questionnaire made for gathering primary data shows good validity and reliability. But the respondents wanted their information to be kept confidential.

5. References

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