

Analyzing the effects of Demographic Factors and social media on Consumer Decision-Making Process for Electronic Gadgets in Telangana: A Statistical Study

Mr. Vinod D*, & Dr. J Venkata Ramana**

*Research Scholar, Department of MBA, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Research Supervisor, Department of MBA, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

Abstract

Online tools and platforms known as social media allow users to build, share, and converse in virtual communities and networks about information, ideas, and opinions. Facebook, Twitter, Instagram, LinkedIn, Snapchat, TikTok, and YouTube are a few of the well-known social media sites. This study aims to examine how social media and demographic factors affect consumers' choices for electronic devices in Telangana, India. The questionnaire was made to gather data on demographics like age, gender, income, education, and occupation as well as inquiries into how people decide what electronic devices to buy. 235 respondents were used in the data collection process, which involved random sampling. Data analysis methods included descriptive analysis, the chi-square test, correlation, and ANOVA. The findings demonstrated that consumers' decision-making processes for electronic gadgets are significantly influenced by age, income, education, and occupation. Additionally, social media websites like Facebook, Instagram, and Twitter had a big influence on how consumers made decisions. According to the research, businesses should take social media platforms into account when planning their marketing strategies for electronic devices. The study gives marketers and decision-makers useful information about how social media and demographic factors affect consumer behaviour in Telangana, India.

Keywords: Demographic factors, Social media, Consumer decision making process, and Electronic Gadgets

Introduction

The purchase of electronic gadgets is an important decision for consumers, as these devices are an integral part of their daily lives. The emergence of social media platforms has significantly altered how consumers make purchases. When making an electronic device purchase decision, consumers are increasingly turning to social media platforms as a source of information. To effectively engage with their target audience on social media, electronic gadget brands in Telangana now face a new challenge as they must comprehend the impact of demographic factors on consumers' decision-making processes.

In this context, this study aims to analyze the impact of demographic factors on consumer decision-making process for electronic gadgets in Telangana. The study will focus on demographic factors such as age, gender, income, education, and occupation, and their relation towards consumers' decision-making process for electronic gadgets.

The results of this study can assist Telangana-based electronic device manufacturers in better understanding their target markets and developing more effective marketing plans. Electronic gadget companies can improve their product offerings, create more persuasive marketing campaigns, and ultimately boost sales by comprehending the impact of demographic factors on consumers' decision-making. Finally, this study has important ramifications for brands of electronic devices looking to engage with their target audience on social media platforms in a meaningful way.

Review of literature

The influence of demographic factors on consumer decision-making for electronic devices has been the subject of numerous studies. One such study conducted by Huang and Chen (2019) found that age, income, and education level significantly influence the decision-making process of consumers when it comes to purchasing electronic gadgets. The study also showed that while older consumers rely more on traditional media for information, younger consumers are more likely to be influenced by social media.

Similar to this, a 2018 study by Alhabash et al. discovered that social media platforms are a crucial information source for consumers when it comes to making an electronic device purchase decision. The study also discovered that consumers' perceptions and attitudes towards social

media advertising are significantly influenced by demographic factors like age, gender, and income level.

Additionally, Wu et al.'s (2018) study discovered that cultural elements like individualism and collectivism have a significant influence on consumers' decision-making when it comes to buying electronic devices. The study revealed that consumers from individualistic cultures are more likely to be influenced by product features and brand image, whereas consumers from collectivistic cultures prioritize social aspects such as product reviews and recommendations from peers.

According to the literature, demographic factors like age, gender, income, education, and occupation have a big impact on how consumers decide which electronic devices to buy. Additionally, social and cultural factors such as social media, advertising, and individualism/collectivism also have a significant impact on consumers' decision-making process. These findings highlight the importance of understanding the target audience's demographic and psychographic profiles in developing effective marketing strategies for electronic gadget brands.

Research methodology

This study used a quantitative research design that involved using a survey to gather numerical data. The sample for the study was chosen using a random sampling technique. Through the use of a structured questionnaire and an online survey, the main data was gathered. The questionnaire was made to gather data on demographics like age, gender, income, education, and occupation as well as inquiries into how people decide what electronic devices to buy. 235 respondents were used in the data collection process, which involved random sampling. To ascertain the impact of social media and demographic factors on consumer decision-making, the gathered data was analyzed using statistical tools like descriptive statistics, correlation, ANOVA, and chi-square tests.

Objectives of the study

1. To identify the effects of social media towards consumers' decision-making process for electronic gadgets.

2. To analyze the demographic factors such as age, gender, income, education, and occupation have relation with consumers' decision-making process for electronic gadgets.
3. To analyze whether there is any significant association of social media on consumers' decision-making process for electronic gadgets.

The study's hypothesis

1. H01: There is no significant effect of social media on consumer decision-making process for electronic gadgets
2. H02: There is no significant relationship between demographic factors and consumers' decision-making process for electronic gadgets.
3. H03: There is no significant association of social media on consumer's decision making process for electronic gadgets.

Data analysis and Interpretation

“Table 1: Table explaining the demographic profile of the selected sample respondents”		
Gender of the respondents	No. of respondents	Percentage
Male respondents	147	63.0
Female respondents	88	37.0
Total	235	100.0
Age	No. of respondents	Percentage
18-25 years	85	36.0
26-35 years	87	37.0
36-45 years	60	26.0
46-55 years	3	1.0
Total	235	100.0
Education	No. of respondents	Percentage
SSC or less	2	1.0
Intermediate	22	9.0
Graduation	165	70.0
Post Graduation or more	46	20.0

Total	235	100.0
Occupation	No. of respondents	Percentage
Students	117	50.0
Working Professionals	59	25.0
Entrepreneurs	6	3.0
Freelancers	9	4.0
Homemakers	44	19.0
Total	235	100.0
Income	No. of respondents	Percentage
0 – 5 Lakhs	102	44.0
5 – 10 Lakhs	85	36.0
10 – 15 Lakhs	29	12.0
15 – 20 Lakhs	9	4.0
Above 20 Lakhs	10	4.0
Total	235	100.0

The above table represents demographics factors like gender, age, education, Income, and Occupation of the respondents. The table explains that 63% of them were males and 37% were females. Maximum respondents were from 26-35 years i.e., 37%, 36% were from the age group of 18-25 years, 26% were from 36-45 years. When their income levels are considered, 44% were earning 0-5 lakhs, 36% were earning 5-10 lakhs, 12% were earning 10-15 lakhs, only 4% were earning 15 – 20 Lakhs and above 20 lakhs each. 50% of the respondents were Students, followed by 25% working professionals and 19% were homemakers.

“Table 2.1: Tabular representation of Descriptives representing the effects of social media on consumers' decision-making process for electronic gadgets.”

consumer purchase decision

social media	Number of respondents	Value of Mean	Std. Deviation value	Std. Error value	95% Confidence Interval for Mean		Minimum	Maximum	Between-Component Variance
					Lower Bound	Upper Bound			
Facebook	40	3.63	.948	.150	3.32	3.93	2	5	
Twitter	44	4.27	1.043	.157	3.96	4.59	1	5	
Instagram	64	4.47	.943	.118	4.23	4.70	1	5	
YouTube	42	4.31	.660	.102	4.11	4.52	3	5	
Reddit	45	3.46	.818	.122	3.21	3.70	2	5	
Total	235	4.07	.979	.064	3.94	4.19	1	5	
Model	Fixed Effects		.897	.059	3.95	4.18			
	Random Effects			.208	3.49	4.64			.192

“Table 2.2: Tabular representation of Test of Homogeneity of Variances representing the effects of social media on consumers' decision-making process for electronic gadgets.”

consumer purchase decision

Levene Statistic	df1	df2	Sig.
2.653	4	230	.034

“Table 2.3: Tabular representation of ANOVA representing the effects of social media on consumers' decision-making process for electronic gadgets.”

consumer purchase decision

	“Sum of Squares”	Degrees of freedom	“Mean Square”	F	Sig.

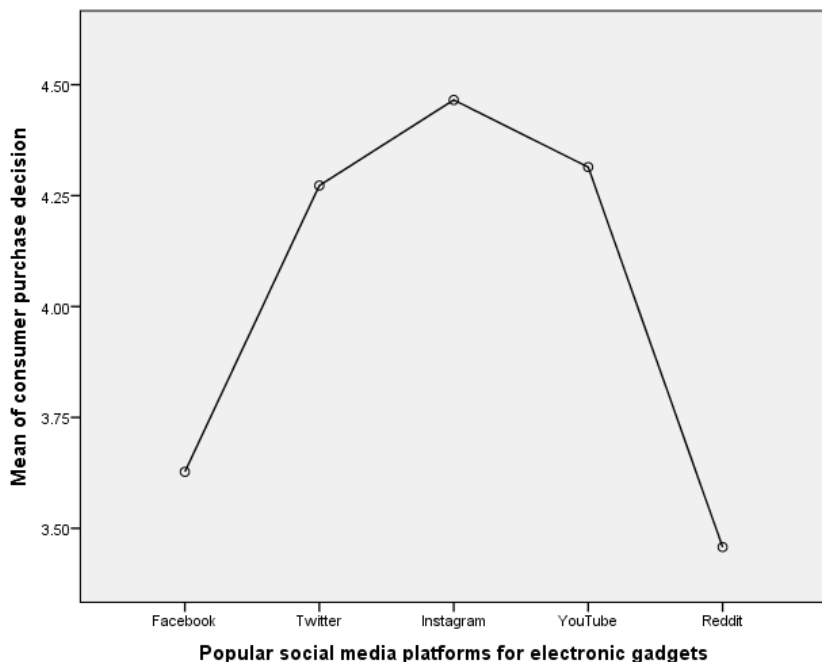
“Between Groups”	39.029	4	9.757	12.124	.000
“Within Groups”	185.093	230	.805		
Total	224.121	234			

“Table 2.4: Tabular representation of Multiple Comparisons of Means representing the effects of social media on consumers' decision-making process for electronic gadgets.”

Dependent Variable: consumer purchase decision
Games-Howell

(I) Popular social media platforms for electronic gadgets	(J) Popular social media platforms for electronic gadgets	Mean Difference value (I-J)	Std. Error value	Sig.	95% Confidence Interval value	
					Lower Bound	Upper Bound
Facebook	Twitter	-.645*	.217	.031	-1.25	-.04
	Instagram	-.838*	.191	.000	-1.37	-.31
	YouTube	-.687*	.181	.003	-1.19	-.18
	Reddit	.170	.193	.904	-.37	.71
Twitter	Facebook	.645*	.217	.031	.04	1.25
	Instagram	-.193	.196	.863	-.74	.35
	YouTube	-.042	.187	.999	-.57	.48
	Reddit	.815*	.199	.001	.26	1.37
Instagram	Facebook	.838*	.191	.000	.31	1.37
	Twitter	.193	.196	.863	-.35	.74
	YouTube	.151	.156	.867	-.28	.58
	Reddit	1.008*	.170	.000	.54	1.48
YouTube	Facebook	.687*	.181	.003	.18	1.19
	Twitter	.042	.187	.999	-.48	.57
	Instagram	-.151	.156	.867	-.58	.28
	Reddit	.857*	.159	.000	.41	1.30
Reddit	Facebook	-.170	.193	.904	-.71	.37
	Twitter	-.815*	.199	.001	-1.37	-.26
	Instagram	-1.008*	.170	.000	-1.48	-.54
	YouTube	-.857*	.159	.000	-1.30	-.41

“*. The mean difference is significant at the 0.05 level.”



ANOVA is useful in identifying any differences in the means. It was used to compare the means of two or more independent comparison groups for a continuous variable. Table 2.1 represents that maximum respondents were using Instagram (64). Only few respondents were using Facebook (40). But there were not many differences in the opinions of respondents towards social media platforms. Levene test clarified the homogeneity of variance in light of table 2.2. Due to the fact that the analysis's "P" value, which is 0.034, is less than 0.05, equal variance is not assumed. The outcome is important. ANOVA is discussed in table 2.3. At the 5% level of significance, the value of "P" was 0.000, which was less than 0.05. This showed that there was little variation in respondents' opinions. It was decided to use the Games Howell method from table 2.4 to determine the significant difference. It displays numerous comparisons of respondents' opinions on how consumers make decisions about electronic devices. The 0.000 P values show that there is no difference in the responses from the various respondents.

“Table 3: Tabular representation of Demographic factors such as age, gender, income, education, and occupation have relation with consumers' decision-making process for electronic gadgets using Correlations”

	Age	Gender	Education	Income	Occupation	Consumer purchase decision

Age	Pearson Correlation value	1	-.377**	.183**	.437**	-.020	.000
	Sig. (2-tailed)		.000	.005	.000	.760	.998
	Number	235	235	235	235	235	235
Gender	Pearson Correlation value	-.377**	1	-.055	-.174**	-.009	.024
	Sig. (2-tailed)	.000		.405	.007	.888	.719
	Number	235	235	235	235	235	235
Education	Pearson Correlation value	.183**	-.055	1	.336**	-.051	-.056
	Sig. (2-tailed)	.005	.405		.000	.435	.389
	Number	235	235	235	235	235	235
Income	Pearson Correlation value	.437**	-.174**	.336**	1	.051	.202**
	Sig. (2-tailed)	.000	.007	.000		.434	.002
	Number	235	235	235	235	235	235
Occupation	Pearson Correlation value	-.020	-.009	-.051	.051	1	-.088
	Sig. (2-tailed)	.760	.888	.435	.434		.177
	Number	235	235	235	235	235	235
consumer purchase decision	Pearson Correlation value	.000	.024	-.056	.202**	-.088	1
	Sig. (2-tailed)	.998	.719	.389	.002	.177	
	Number	235	235	235	235	235	235
“**”. Correlation is significant at the 0.01 level (2-tailed).”							

The relationship between Demographic factors and consumers' decision-making process for electronic gadgets was evaluated using correlation analysis. Correlation was used to assess Objective 2. Correlation is the statistical term for the relationship between two variables. Two variables are said to be correlated when they move either in the same direction (positive correlation) or in the opposite direction (negative correlation).

The relationship between demographic factors and consumers' decision-making process for electronic gadgets is investigated using correlation analysis. The significant and positive correlation coefficient would suggest that there is a strong correlation between the two variables. This would imply that demographic factors have a significant relationship on consumers' decision-making process for electronic gadgets.

“Table 4.1: Tabular representation of Chi-Square Tests for analyzing significant association of Social media on consumers' decision-making process for electronic gadgets.”

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	391.685 ^a	250	.000
Likelihood Ratio	361.182	250	.000
Linear-by-Linear Association	1.696	1	.193
N of Valid Cases	235		

“a. 301 cells (98.4%) have expected count less than 5. The minimum expected count is .02.”

“Table 4.1: Tabular representation of Symmetric Measures for analyzing significant association of Social media on consumers' decision-making process for electronic gadgets.”

		Value	Approx. Sig.
“Nominal by Nominal”	Phi value	1.291	.000
	Cramer's V value	.577	.000
	Contingency Coefficient value	.791	.000
“N of Valid Cases		235	

a. Not assuming the null hypothesis.
 b. Using the asymptotic standard error assuming the null hypothesis.”

The Chi-Square formula can be used to determine how much of a difference there is between the observed counts and the expected counts. When the p-value is less than or equal to the Chi-square significance level, there is enough evidence to conclude that the observed distribution is different from the expected distribution. We can infer that there is a relationship between the variables as a result. There is a high degree of correlation between two sets of data when the chi-square value is low. Considering that the p values at 0.000 are below 0.05. The alternative hypothesis is accepted and the null hypothesis is rejected at a 5% level of significance,

demonstrating a very strong association between the variables. Consumer decision-making and social media are well correlated.

Findings

1. The study represents that maximum respondents were using Instagram as their social media platform.
2. Majority of them were strongly agreeing towards Instagram has a significant effect towards consumer decision making process.
3. According to an ANOVA, social media significantly influences how consumers choose electronic devices.
4. Correlation explains that is a significant relation between demographic factors and consumer decision making process.
5. The Chi-Square test shows a strong correlation between social media and consumer decision-making for electronic devices.

Suggestion

1. The use of social media may have particular effects on various groups of people. Businesses are using social media influencers more frequently to market their goods and services.
2. Different consumer groups may respond differently to social media marketing tactics.
3. It is possible to investigate in greater detail the efficacy of social media across a range of industries and how businesses can adapt their social media strategies to suit their industry.
4. Demographic factors showed a greater effect on consumer decision making process, businesses can concentrate on this point.
5. Companies should consider demographic factors and social media platforms in their marketing strategies for electronic gadgets.

Conclusions

In conclusion, the statistical study on the influence of social media and demographic factors on consumer decision-making for electronic devices in Telangana has shed important light on consumer behaviour in the market. The study's conclusions imply that demographic variables like age, gender, income, education, and occupation have a big impact on how consumers decide which electronic devices to buy. The study also emphasises the significant influence that social

media platforms have on how consumers make decisions, with consumers using these platforms for research and having their buying decisions affected by the testimonials, suggestions, and advertisements they encounter there. The study's conclusions offer companies that sell electronic devices in Telangana useful information that they can use to create marketing and advertising plans that effectively target particular demographic groups and give them a competitive advantage. Finally, the study helps us better understand how social media, demographic factors, and consumer behaviour interact in Telangana market for electronic devices.

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