



Customer Satisfaction of Telecommunication Users

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ABSTRACT

Customer satisfaction is highly valued in the telecommunications business, which is known for its quick expansion and severe rivalry. An overview of the variables affecting customer satisfaction in the telecommunications industry, along with measurement techniques and their effects on telecom firms, are given in this abstract. In the telecom industry, customer happiness is a multifaceted concept that is impacted by many different elements. Consistently, service quality—including dependability, responsiveness, and assurance—emerges as a key factor in determining satisfaction. Furthermore, price policies, perceived equality, and transparency have a big influence on how customers feel. For sustaining high levels of satisfaction, efficient customer service and effective resolution of complaints are essential.

Introduction

Consumer behaviour is a broad field of study that looks at how individuals and groups of people choose the goods and services they use, consume, and discard. It includes a broad spectrum of internal and external, as well as consumer-shaping influences. Analyzing consumer behavior is essential for companies and advertisers because it enables them to create efficient marketing plans and customize goods and services to satisfy their target market's demands and desires.

Internal Factors:

psychological elements: Perception is the way people understand and make meaning of the information they are exposed to. The underlying needs and desires that prompt people to act are known as motivation. Learning is the process of gaining information and experience that affects judgments in the future. Personal values and ideas that influence consumer preferences are known as attitudes and beliefs. How consumers recall and access information about goods and brands is referred to as memory and recall.

Cognitive and Emotional Processes:

Emotions: Feelings and attitudes that might affect judgment. Decision-making processes such as problem-solving and decision heuristics are examples of cognitive processes.

Outside influences:

Social Aspects

Reference Groups: The impact of friends, family, and social networks on a person's purchasing decisions. Social class: How a consumer's social situation affects their preferences.

Consumer behaviour is influenced by shared values, traditions, and subcultures.

Social Norms and Roles: Behaviours and expectations connected to particular social roles. environmental elements

Economic Conditions: Consumer spending habits are influenced by economic stability, inflation, and income levels.

Technological developments: New items can be made using emerging technologies, which can also affect customer behaviour.

The availability of products and advertising are impacted by the legal and regulatory environment.

Cultural and Demographic Trends: Consumer preferences may change as a result of changing demographics and cultural trends.

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Process for Making Decisions: Identifying a problem or requirement that has to be solved is known as problem recognition. Searching for information to learn more about brands and products. Comparing numerous choices and their features to evaluate the alternatives. Making a decision to buy something based on an evaluation. Examining the fulfilment and value of the purchase after it has been made. **Factors Affecting Product Selection:** Features, price, quality, and brand reputation are examples of product attributes.

Personal interests: Different people have different tastes, interests, and lifestyles. Reviews, endorsements, and recommendations from others make up external recommendations. The harmony between a product's costs and benefits is known as perceived value. Cultural and social factors include societal pressure, trends, and cultural norms. **Following Purchase Behaviour Evaluation** of whether the product matched expectations using the terms satisfaction and dissatisfaction. Repeat business and brand loyalty are examples of customer loyalty. By talking your experiences with others, you can have an impact on their choices.

Segmenting consumers: To more effectively focus marketing initiatives, the market is divided into separate groups based on psychographics, demographics, behavior, and other variables. **Models of consumer decision-making,** Diverse viewpoints on how consumers make decisions are provided by models including the sociocultural model, physiological model, and economic model.

Online Purchasing Patterns: the distinctive features of modern consumer behaviour, such as online purchasing, evaluations, and social networking influence. **Consumer Ethics and Sustainability:** the growing demand for ethical and sustainable products as a result of consumers' growing concern about these issues.

Consumer behaviour worldwide: How global market dynamics and cultural variations affect consumer choices.

A comprehensive approach that takes into account both the individual's psyche and the larger socio-cultural background is necessary to understand consumer behaviour. It's a dynamic industry that keeps changing as society evolves, technology advances, and consumer preferences change. Businesses with a greater chance of success in the market are those who can adjust to these changes and comprehend and react to consumer behavior efficiently.

A distinct mix of elements, shaped by the nation's varied culture, economic circumstances, social conventions, and historical backdrop, affect consumer behavior in India. Businesses and marketers who wish to compete in this dynamic and quickly expanding market must have a thorough understanding of Indian customer behavior. India is renowned for its cultural variety, which includes a wide range of languages, religions, customs, and cuisines. Consumer habits and preferences can differ greatly between geographical areas and cultural groups. Marketers must take this variety into account when creating products and marketing plans.

Family-Centric: The importance of the family is highly valued in Indian culture. Family members frequently have a large impact on a person's purchase choices, especially when it comes to expensive products like homes, cars, and jewels. Advertising by marketers frequently aims at appealing to family principles and customs.

Religion and Holidays: Religious holidays and celebrations are very important to Indian shoppers. During holidays like Diwali, Eid, and Christmas, a lot of significant purchases are made, including clothes, technology, and gifts. During these festive seasons, marketers frequently generate unique promotions and deals.

Price Sensitivity: Indian consumer behaviour is significantly influenced by price sensitivity. The majority of Indian shoppers are budget-conscious and seek out products that are worth their money. Both offline and online, discounts, promotions, and haggling are standard business methods.

E-commerce expansion: Consumer behaviour in India has changed as a result of e-commerce expansion. Customers may now access a wide variety of products and shop online while comparing prices and reviews. Discounts and cashback incentives are frequently provided by e-commerce platforms, which further influences consumer choices.

Consumer spending in urban and rural locations is different from one another. Consumers in urban areas are frequently more brand- and tech-savvy, whereas those in rural areas may place a higher value on traditional and regional goods. The gap between the urban and rural areas is gradually closing as a result of urbanization and better connection.

Changing Consumption Patterns: Rapid urbanization and the rise of the middle class have resulted in changes to consumption patterns. Convenience meals, contemporary equipment, and global brands are all in higher demand.

India has a sizable youth population, and these individuals frequently influence patterns of consumer behaviour with their preferences. Younger consumers are more willing to experiment with new brands, goods, and technologies. Additionally, they use social media, thus digital marketing is essential.

Gold is preferred because it has a particular place in Indian culture and is frequently seen as a secure investment. For marriages and other significant occasions, many customers purchase gold jewelry and decorations.

Environmental Concerns: Consumer demand for sustainable and eco-friendly products is rising as a result of an increasing understanding of environmental problems. Urban consumers are particularly influenced by this trend.

Government Policies: Government rules and regulations, particularly in the areas of healthcare, education, and finance, can have a big impact on how Indians behave as consumers. India contains a mix of both domestic and foreign brands, and customers frequently base their decisions on things like reputation of the brand, quality, and price.

Traditional vs. new Retail: Traditional marketplaces (bazaars) continue to be well-liked, but new retail forms, such as malls and supermarkets, are gaining hold and provide shoppers with a distinctive shopping experience.

For firms aiming to prosper in the Indian market, it is crucial to comprehend and manage these elements. In order to attract the interest and allegiance of Indian consumers, it is frequently essential to use localized marketing methods that take cultural quirks and regional preferences into account.

In the telecommunications sector, customer happiness is crucial to corporate success as it has a direct impact on retention of customers, brand loyalty, and profit. To keep a good reputation and be competitive, telecommunications companies must meet and exceed customer expectations. Several important elements that affect customer satisfaction in the telecom sector include the following:

Network Dependability and Quality:

Customers anticipate dependable service and constant network coverage. Dissatisfaction may result from frequent phone dropouts, sluggish data speeds, and network failures. To provide high-quality service, telecom operators must make investments in infrastructure and technology.

Bandwidth and Data Speed: Consumers place a high value on fast and reliable internet connections due to the growing use of smartphones and data-intensive applications. Customer satisfaction depends on having enough bandwidth to manage data flow during peak times.

Variety in Products and Plans: To meet the demands and budgets of various customers, telecom carriers should provide a choice of plans and packages. Customer satisfaction can be increased by offering individualized programs and add-on options.

Added-Value Services: Streaming video, international calling, and digital security are examples of value-added services that can draw in and keep clients. Services can be combined to offer users convenience and cost benefits.

Coverage of the network and roaming: Telecom companies should guarantee complete network coverage, even in outlying and rural areas. Customers that frequently travel require roaming services that are both reasonable and dependable.

Dissatisfied clients can become devoted ones if their comments and difficulties are handled professionally. Telecom companies should have clear procedures in place for resolving disputes and paying clients if necessary.

Data security and privacy: Consumers are becoming more worried about data security and privacy. Telecom companies should convey their commitment to client data security and put in place effective data protection procedures. Pricing that is competitive and promotions In order to draw in new consumers, telecom companies frequently compete on price by providing discounts, promotions, and special offers. Customers who have already purchased something may anticipate incentives and prizes for loyalty.

Social responsibility and participation in the community: Customers value telecom firms who take social responsibility seriously and support local causes. A company's reputation can be improved by demonstrating a dedication toward environmental sustainability and social responsibility as a whole.

User-friendly interfaces and applications Easy access to financial information and services should be provided by mobile apps as well as online account management systems. When it comes to controlling their telecom services, consumers value convenience.

Learning Resources: Customer satisfaction may increase by providing informational materials and manuals on how to use telecom services efficiently. These tools can assist users in getting the most out of their strategies and equipment.

Telecom companies frequently survey customers, track comments on social media, and examine customer service contacts to see how satisfied customers are. Customer satisfaction levels must be maintained and improved by ongoing improvement initiatives that are based on market trends and customer feedback.

Examining several facets of the telecommunication sector, which includes telecoms service providers, makers of equipment, infrastructure suppliers, and related technology businesses, is part of an examination of the telecom industry. Here is a thorough summary of the telecom sector analysis:

Overview of the market:

The telecom sector is crucial to the global economy because it offers both individuals and corporations necessary communication services. Broadband internet, data services, fixed-line, and mobile telecommunications are all included.

Trends in Technology

Adoption of 5G: The launch of 5G networks brings with it the promise of faster data transfer rates, lower latency, and support for Internet of Things (IoT) applications.

Fiber Optic Expansion: In order to provide high-speed internet and support 5G infrastructure, fiber-optic networks are growing.

Edge Computing: To reduce delay for data-intensive applications, telecom corporations are investing in edge computing.

Market Environment: The market is fiercely competitive, with both long-standing competitors and new rivals. Traditional telecom firms are not the only ones in competition; tech behemoths like Google and Amazon are also making inroads into the sector.

Regulatory Framework: Government rules regarding spectrum allocation, licensing, pricing, and consumer protection frequently apply to the telecommunications industry. The dynamics of an industry can be greatly impacted by regulatory changes.

Client Behaviour: Data-centric services like streaming, online gaming, and video conferencing are becoming more and more popular with consumers. Broadband and connectivity services are still in high demand.

Industry Difficulties: Investment in infrastructure is necessary to build and upgrade networks, particularly those for 5G and rural broadband.

The threat of OTT services: Traditional telephony and messaging services are in competition with over-the-top (OTT) services like WhatsApp and Skype. Privacy and security of client data are concerns that telecom firms must contend with.

Possibilities IoT Development: The Internet of Things offers telecom companies great potential to connect numerous devices and sensors.

Smart Cities: To support IoT, data analytics, and automation, smart cities require a strong telecom infrastructure.

International Expansion: To establish a global presence and seize new markets, several telecom operators look to mergers and international expansion.

Indian telecom players

In the very competitive Indian telecom sector, there are a number of major rivals as well as several smaller regional carriers. These telecom providers provide a wide range of services, some of which include fixed-line, broadband, and mobile telephone.

Bharti Airtel: One of the biggest telecom providers in India is Bharti Airtel, also known as Airtel. It provides a wide range of services, including as broadband, digital TV, and mobile phone and data services. There is a considerable presence of Airtel in India and other nations.

Reliance Jio Info comm: Reliance Jio, a Reliance Industries company, is a market disruptor in the Indian telecom industry. When it first launched, it provided free voice and data services, which helped it quickly gain popularity. Jio primarily manages 4G and 5G networks, and it has significantly increased India's internet consumption.

Vodafone Idea Limited: Vodafone Idea, often known as Vi, is the offspring of the merger of Idea Cellular and Vodafone India. It offers mobile and broadband services and is one of India's biggest telecom companies. Vodafone and Idea are brand names used by Vi.

BSNL: One of India's first government-owned telecom companies is BSNL (Bharat Sanchar Nigam Limited). Broadband, fixed-line and mobile services, as well as enterprise solutions, are among the many telecom services it offers. Both urban and rural areas are served by BSNL.

Mahanagar Telephone Nigam Limited, or MTNL: Another government-owned telecom company is MTNL, which primarily provides service to Delhi and Mumbai. It provides consumers with broadband, mobile, and landline services.

Literature review

- Numerous studies highlight the important connection between customer happiness and service quality in the telecommunications industry. The SERVQUAL framework developed by Parasuraman, Zeithaml, and Berry in 1985 has been widely used to evaluate aspects of service quality such as dependability, responsiveness, assurance, empathy, and tangibles. It is supported by studies by Buttle (1996), Spreng and Mackoy (1996), and others that better customer satisfaction and loyalty are correlated with improved service quality.
- Customer happiness is significantly impacted by pricing methods. According to Jha and Shankar's (2004) research, perceived pricing fairness and customer happiness are positively associated. According to research by Liu et al. (2001) and Keaveney et al. (1995), exorbitant fees and hidden costs, on the other hand, might cause discontent.
- In the telecommunications industry, providing excellent customer service and relationship management are crucial to ensure client pleasure. Customer satisfaction and loyalty are significantly impacted by individualized customer interactions, prompt issue resolution, and skillful complaint handling, as shown by Croteau and Li (2003). Similar findings from Sirdeshmukh et al. (2002)'s research emphasize the value of connection quality in communications.
- Customers may be discouraged from changing telecom providers due to high switching prices, which might lower customer satisfaction. A study by Kim et al. (2004) examines "switching costs" and how they affect consumer loyalty. To reduce churn and preserve high satisfaction levels, telecom businesses frequently use retention methods (Luo & Hsu, 2015).
- Cross-cultural research in the telecommunications sector shows that customer satisfaction levels vary depending on the cultural setting. The necessity for culturally appropriate tactics is highlighted by research by Gürhan-Canli and Maheswaran (2000) that reveals cultural influences affect consumer expectations and ratings of telecom services.

Research methodology

Primary research was conducted by floating google form which contains the questions as follows,

- Quality of the network
- Customer support
- Price
- Delivery of the sim
- Advertisement
- Age
- Place of residence

The response of 50 members were collected to analyse ,the multiple regression model was used for analysis.

Usage of python program for analysis, and received the following analysis: (model.summary())

OLS Regression Results

Dep. Variable:	Satisfaction	R-squared:	0.939
Model:	OLS Adj.	R-squared:	0.917
Method:	Least Squares	F-statistic:	42.94
Date:	Wed, 27 Sep 2023	Prob (F-statistic):	5.28e-08
Time:	09:16:57	Log-Likelihood:	-43.694
No. Observations:	50	AIC:	99.39
Df Residuals:	14	BIC:	105.4
Df Model:	5		
Covariance Type:	nonrobust		

Coef	std	err	t	P> t	[0.025	0.975]
const	43.4943	10.353	4.201	0.001	21.289	65.700
Price	0.0137	0.336	0.041	0.968	-0.707	0.734
Quality	5.5555	2.042	2.721	0.017	1.176	9.935
Support	0.8655	1.019	0.849	0.410	-1.320	3.051
Delivery Time		-0.5090	1.372	-0.371	0.716	-3.451 2.433
Advertising		1.1534	0.470	2.454	0.028	0.145 2.161

Omnibus:	0.450	Durbin-Watson:	1.410
Prob(Omnibus):	0.799	Jarque-Bera (JB):	0.566
Skew:	-0.252	Prob(JB):	0.753
Kurtosis:	2.347	Cond. No.	680.

Dependent variable: Satisfaction

The dependent variable (the one we're attempting to forecast) is identified in this line as "Satisfaction" in this example.

Statistics for models

R-square measures the efficiency with which the independent variables (Price, Quality, Support, DeliveryTime, and Advertising) explain the variation in the dependent variable (Satisfaction). The model's independent variables have an R-squared of 0.939, which means they can explain around 93.9% of the variation in customer satisfaction. As seen by the high R-squared value, the model well fits the data.

Adjusted R-squared that has been adjusted takes into account the number of independent variables present in the model. It is widely used to assess if adding more variables to a model improves its fit. In this case, the revised R-squared is 0.917, which is still highly significant.

Prob (F-statistic) and F-statistic: The F-statistic evaluates the model's overall significance. The F-statistic in this instance is 42.94, and the p-value (Prob (F-statistic)) that goes along with it is extremely near to zero (5.28e-08), demonstrating that the model as a whole is statistically significant.

Using the F-statistic, you may determine the overall importance of Model Fit Details

A measure of how well a model predicts the observed data is the log-likelihood. A better match is indicated by lower values. It is -43.694 here. AIC and BIC are information criteria for selecting models. A better-fitting model is indicated by lower AIC and BIC values. The BIC is 105.4, while the AIC is 99.39.

Coefficients of a model

The coefficients for every predictor variable in the model are shown in the "coef" table. The estimated impact of all of the independent variables on customer satisfaction is shown by these coefficients. This is the regression equation's intercept term. The intercept in this instance is 43.4943.

This includes the coefficients for the corresponding predictor variables: price, quality, support, delivery time, and advertising. They specify the predicted change in customer satisfaction for a one-unit change in each predictor, assuming that all other predictors remain constant. For instance, consumer satisfaction is anticipated to rise by 5.5555 units for every unit improvement in quality.

The standard error for every coefficient estimate is shown here as std err. It evaluates the estimate's accuracy.

The t-statistic calculates how much the coefficient estimate deviates from zero in terms of standard errors. Greater absolute t-values point to more powerful predictors.

P>|t|: The p-value for each coefficient is shown in this column. The coefficient being equal to zero is the null hypothesis that is being tested. P-values below 0.05 indicate more significant predictors. Low p-values (0.017 and 0.028, correspondingly) in this instance show that Quality and Advertising are significantly different predictors.

Model Premises

Omnibus: This verifies the residuals' (errors') supposed normalcy. The residuals are believed to be normally distributed if the p-value is near to 1.

Durbin-Watson: This analyzes the residuals for autocorrelation. Values around 2 indicate the absence of any discernible autocorrelation.

Jarque-Bera (JB): This examines if the residuals are distributed appropriately. A high p-value that is around 1 indicates normalcy. These statistics, skew and kurtosis, characterize the form of the residual distribution.

Interception

The intercept or constant term in the regression equation is shown in the "const" row. The anticipated intercept in this situation is 43.4943. Assuming that all predictor variables (Price, Quality, Support, Delivery Time, and Advertising) are equal to zero, this number indicates the predicted degree of customer satisfaction. The precision of this estimate is measured by the standard error, and the t-statistic (4.201) shows the number of standard errors the coefficient is from zero. The low p-value (0.001) indicates that the intercept is statistically significant, which suggests that it is unlikely to be zero. The 95% confidence interval indicates that there is a 95% probability that the real intercept will fall inside the specified range.

Price

The coefficient for the Price variable is shown in the "Price" row. The coefficient in this instance is 0.0137, meaning that for every one unit rise in price, an additional 0.0137 units of customer satisfaction should be expected. The p-value (0.968) is far higher than the normal significance level of 0.05, indicating that the coefficient is not of statistical significance. This shows that under this model, price isn't a very reliable indicator of consumer happiness.

Quality of network

The row labeled "Quality" displays the Quality variable's coefficient. Given that the coefficient in this case is 5.5555, it is reasonable to anticipate an increase in customer satisfaction of 5.5555 units for every unit of quality improvement. The coefficient is statistically significant since the p-value (0.017) is lower than 0.05 and demonstrates a strong positive relationship between Quality and customer satisfaction.

Support, Delivery Time, and Advertising variables

The accompanying rows display the coefficients for the Support, Delivery Time, and Advertising variables. With a p-value of 0.410 and a support coefficient of 0.8655, support is not statistically significant. Similarly, Delivery Time does not significantly differ from the control group with a p-value of 0.716 and a coefficient of -0.5090. The statistically significant coefficient for advertising is 1.1534 (p-value: 0.028).

Conclusion:

In the telecommunications sector, customer satisfaction is a complex phenomena that is impacted by a variety of elements, including service quality, cost, customer service, technology, and cultural factors. For telecom firms looking to improve customer happiness, keep consumers, and maintain

competitiveness in a volatile market environment, effective management of these aspects is essential. To give useful insights for the industry, future research should continue to examine new developments, such as the influence of 5G technology and changing customer expectations.

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