

CONSUMER BEHAVIOUR AND COMPETITIVE TRANSFORMATION IN THE INDIAN TELECOM SECTOR: AN EMPIRICAL STUDY OF HIMACHAL PRADESH, INDIA

¹Chhetan Chhoidub, ²Manoj Sharma, ³Dharmender Kumar

¹Associate Professor, Department of Commerce, PGDAV College (University of Delhi), New Delhi, India

²Assistant Professor, Department of Commerce, Himachal Pradesh University, Shimla-5, India

³Assistant Professor in Commerce, (Govt. Degree College Sihunta, District Chamba) Department of Higher Education, Government of Himachal Pradesh, Shimla, Himachal Pradesh, India

Abstract

The advent of Reliance Jio has significantly impacted the Indian telecoms sector, altering consumer habits, enhancing digital connection, and intensifying market competitiveness. This study is an attempt to explore consumer behaviour and the competitive transformation of telecom sector with special reference to Reliance Jio in Himachal Pradesh. The research design was descriptive and analytical in nature and primary data were collected from 1,500 respondents by using structured questionnaire through multi-stage sampling technique. Descriptive statistics and Pearson's Chi-square test were used to analyse the relationship between age of the respondent and key dimensions of consumer behaviour. The results indicate that 78.0% of the respondents are using Reliance Jio currently while 90.0% have used it in the past, showing that it has strong market penetration. The quality of the internet and the network coverage became the key factors in the selection of an operator. Prepaid connections remained the most popular type of subscription. Customer satisfaction levels were also found to be high, there was an increase in mobile data consumption and positive perceptions about Jio were observed in terms of improving competition, service quality and digital transformation. All associations between age and the chosen behavioural variables were statistically significant ($p < 0.001$). The study concludes that Reliance Jio has changed consumer behaviour and competitive dynamics in the Indian telecommunications sector, with important implications for telecom operators, policymakers and regulators aiming to bolster customer-centric strategies and sustainable digital development.

Keywords: *Consumer Behaviour; Reliance Jio; Telecommunications Industry; Competitive Transformation; Customer Satisfaction; Digital Connectivity.* JEL Classification: D12, L13, L96, M31.

1. INTRODUCTION

In the last decade, the Indian telecommunications industry has witnessed a phenomenal shift from a traditional speech orientated communication system to a digitally driven data dense ecosystem. This changeover has been made possible by regulatory reforms, quick technology developments, increasing penetration of smartphones and increased usage of mobile internet for communication, commerce, education, entertainment and financial services (Singh, 2004; Tangirala, 2019).

Mobile connectivity is increasingly becoming the bedrock of India's digital economy and the telecom sector has become a crucial driver of consumer behaviour, market competition and adoption of digital services (Parsheera & Trehan, 2022).

Reliance Jio Infocomm Limited (Reliance Jio) was a defining milestone in this shift. In June 2015, Mukesh Ambani announced the company's entry into the telecommunications sector at the 41st Annual General Meeting of Reliance Industries Limited, which drew significant attention to its likely influence on an already competitive industry (Rishi et al., 2018). Reliance Jio's launch in September 2016, which provided ultra-low-cost mobile data, free voice services and an integrated portfolio of digital applications and platforms, changed the competitive environment altogether (Bhatia & Palepu, 2016; Curwen, 2018). The proposal played an essential part in lowering mobile internet cost, accelerating digital inclusion and reshaping consumer expectation as well as market dynamic (Gupta et al., 2019; TRAI, 2024).

Prior to Jio's entry, high data price and economic affordability were barrier to internet adoption for semi-urban, rural and geographically challenging area public. Affordable mobile broadband has been central to driving digital inclusion by increasing access to online education, digital transaction, e-governance, healthcare and social

networking among different socio-economic segment (GSMA, 2023; World Bank, 2022). Mobile connectivity evolved from a basic mean of communication to vital element of economic participation and social advancement.

The entry of Reliance Jio triggered one of the most dramatic competitive upheavals in history of Indian telecom industry. The aggressive pricing methods triggered an industry-wide tariff war and forced the incumbent operators to lower their prices, restructure their business models and invest extensively in network modernisation (Curwen, 2018; Baba & Haq, 2025). Fierce competition led to mergers, acquisitions, and exits from the market, culminating in the consolidation of the industry into a somewhat concentrated oligopolistic structure (Curwen, 2018; Baba & Haq, 2025). At the same time, the performance measures changed from traditional ones, such as subscriber growth, to others, such as average revenue per user (ARPU), customer retention, and digital service integration, which led telecom operators to engage in long-term strategy realignments (Rishi et al., 2018). The other was Jio's massive investment in fourth-generation (4G) infrastructure, fibre-based internet and digital platforms and bundled ecosystem services that positioned it as both a technological innovator and a disruptive market player (Varghese, 2006; Mawandia & Modi, 2021).

These structural alterations have also changed consumer decision-making. Previous studies suggest that mobile internet usage has expanded beyond traditional voice communication to include high-bandwidth applications like video streaming, social media participation, digital payments, online education, telemedicine, and cloud-based services (Lonare et al., 2018; Jain, 2020). Moreover, price-based factors have gradually been replaced by service quality, network dependability, internet speed and overall user experience as the determinants of consumer choice (Rudramurthy & Sendhil Kumar, 2019; Ansari & Misra, 2020). The evolution is part of wider behavioural shift where telecom services are more judged by consumer on how they contribute to digital lifestyle, rather than simply accessing affordability.

At industrial level, entry of Reliance Jio has hastened competitive restructuring and technology convergence. Jio enhanced its market position through strategic alliance with global technology company, entry into digital platform and integration between telecommunication, content, cloud computing and financial technology. These actions have raised key issue about long-term competition, regulatory oversight, market concentration and digital governance (Parsheera & Trehan, 2022; Baba & Haq, 2025; Singh & Kumar, 2025). Such events point to the wider impact of disruptive innovation on consumer welfare and the sustainability of competition in India's fast-changing digital economy.

The effect of Reliance Jio on pricing, competition and digital adoption at the national level has been widely discussed in the extant literature, but there is limited empirical evidence from geographically diversified regional settings. This gap is more pronounced in Himachal Pradesh where the difficult terrain, scattered habitations and different levels of digital infrastructure present specific hurdles to the supply of telecom services and adoption by consumers. Connectivity and service accessibility may affect consumer behaviour differently among regions than what is observed at the national level. Therefore, a study of these dynamics in Himachal Pradesh provides a good understanding of how disruptive telecom innovations work in various geographical settings.

In this situation, the current study entitled "Consumer Behaviour and Competitive Transformation in the Indian Telecom Sector: An Empirical Study of Reliance Jio in Himachal Pradesh" is intended to study how Reliance Jio has affected the customer behaviour and changed the competitive structure in the state. The study enhances the previous national studies by providing empirical evidence based on regions and assessing customer preferences, service acceptance, satisfaction, usage behaviour, switching decisions and views of industry transition. The findings contribute to the literature on consumer behaviour, disruptive innovation and competition in the telecommunications sector and have practical implications for telecom operators, policy-makers and regulators aiming to foster inclusive digital development and sustainable competition.

2. OBJECTIVES OF THE STUDY

Based on the title, "*Consumer Behaviour and Competitive Transformation in Indian Telecom Sector: An Empirical Study of Reliance Jio in Himachal Pradesh*," this study is guided by following objectives:

1. To examine influence of Reliance Jio on consumer behaviour by analysing telecom operator preference, service adoption, mobile usage patterns, customer satisfaction, switching behaviour and service attribute preference among consumer in Himachal Pradesh.

2. To evaluate competitive transformation of Indian telecommunication sector following entry of Reliance Jio by assessing consumers' perception of change in competition, pricing, network quality, service innovation and overall development of telecom industry in Himachal Pradesh.

3. MATERIALS AND METHODS

3.1 Research Design

The present study adopted a quantitative, empirical research design using a descriptive-analytical approach to investigate consumer behaviour and competitive transformation of Indian telecommunication sector following entry of Reliance Jio. The descriptive component was employed to profile respondent and identify pattern in telecom usage, whereas analytical component examined association between respondents' age and various dimension of consumer behaviour, including telecom operator preference, service adoption, customer satisfaction, switching behaviour, usage pattern and market competition perception. This research design is appropriate for analysing behavioural response and competitive change in dynamic telecommunication environment.

3.2 Study Area

The study was conducted in Shimla and Dharamshala, prominent urban centre of Himachal Pradesh. Shimla, the state capital, representing a relatively developed urban market with higher digital penetration and advanced telecommunication infrastructure, whereas Dharamshala represent an important commercial and administrative centre of Kangra region, characterized by diverse consumer demographic and heterogeneous network condition. Selection of these two cities provide a suitable regional context for consumer behaviour assessment and evaluation of competitive impact of Reliance Jio in geographically diverse Himalayan state.

3.3 Population, Sampling Technique and Sample Size

Target population contain mobile telecom subscriber residing in Shimla and Dharamshala who had experience using mobile telecommunication service. Data were collected from 1,500 respondents through a non-probability convenience sampling technique.

Convenience sampling was adopted as study sought to investigate consumer perception and behavioural response among accessible mobile subscriber across different demographic category. To improve sample diversity, respondent representing different age group, gender, occupation, income category, telecom operator and mobile connection type were included in survey.

Final sample size of 1,500 respondents considerably exceeds minimum sample size generally recommended for behavioural and consumer research, thereby enhancing the statistical reliability of finding and providing sufficient observation for cross-tabulation and Chi-square analysis.

3.4 Pilot Survey and Questionnaire Development

Primary data were collected using structured and pre-tested questionnaire developed after extensive review of literature on consumer behaviour, telecommunication and market competition. Before conducting main survey, pilot study involving 50 respondents (25 from Shimla and 25 from Dharamshala) was undertaken to assess clarity, sequence, wording and relevance of questionnaire item.

Based on feedback received during pilot survey, minor modification was incorporated to improve wording of certain question and eliminate ambiguity. The responses obtained during pilot study were excluded from final analysis.

3.5. Statistical Analysis

Collected data were coded, verified and analysed using Statistical Package for Social Sciences (SPSS), Version 29.0. Descriptive statistical technique including frequency and percentage, were employed to summarise respondents' demographic characteristic and telecom usage behaviour. To examine association between respondents' age group and various dimension of consumer behaviour, Pearson's Chi-square test of independence was employed. The Chi-square test was selected because both independent and dependent variable was categorical in nature. Before conducting analysis, the assumption of Chi-square test was verified by examining expected cell frequency. These assumptions were satisfied in all analysis, with exception of one table in which fewer than 20% of expected

frequencies were below five, which remain within acceptable statistical threshold. Statistical significance was evaluated at 5% significance level ($p < 0.05$).

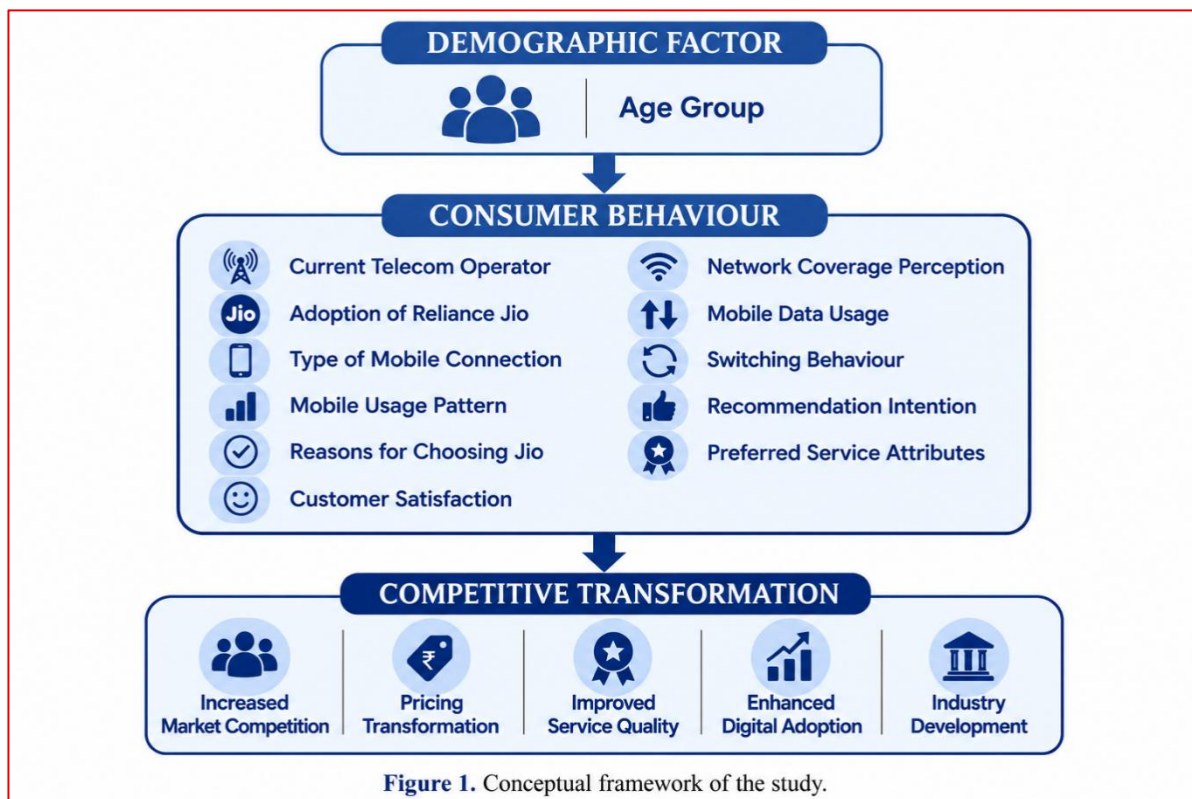
3.6. Ethical Considerations

Participation in survey was involved voluntary. Prior to data collection, respondents were informed about academic purpose of study and assured that their response would remain anonymous and confidential. No personally identifiable information was collected and data were used exclusively for research purpose.

3.7. Conceptual Framework

Study is based on the premise that consumer behaviour is influenced by demographic characteristic particularly age, which subsequently affect telecom service adoption, satisfaction, usage behaviour, switching decision, recommendation intention and perception regarding competitive transformation within the telecommunication industry.

The analytical framework represented as follows:



3.8. Scope of the Study

The study pays attention on analysing consumer behaviour and competitive transformation associated with Reliance Jio among telecom subscriber in Shimla and Dharamshala, Himachal Pradesh. Findings provide important regional insight into impact of disruptive innovation within telecommunication sectors; they should be interpreted within geographical scope of selected study area. The result contributes to broader understanding of consumer behaviour and market competition in India's rapidly evolving digital economy.

4. RESULTS AND DISCUSSION

This section demonstrates finding from analysis of data and discuss them in context of research objective and literature. Results are presented in structured and coherent manner using relevant statistical technique to draw attention to important pattern, correlation and trend. Appropriate discussion of result is offered to explain finding, compare with prior research and draw reasonable conclusion, offering coherent interpretation of research findings.

Demographic Profile of the Respondents

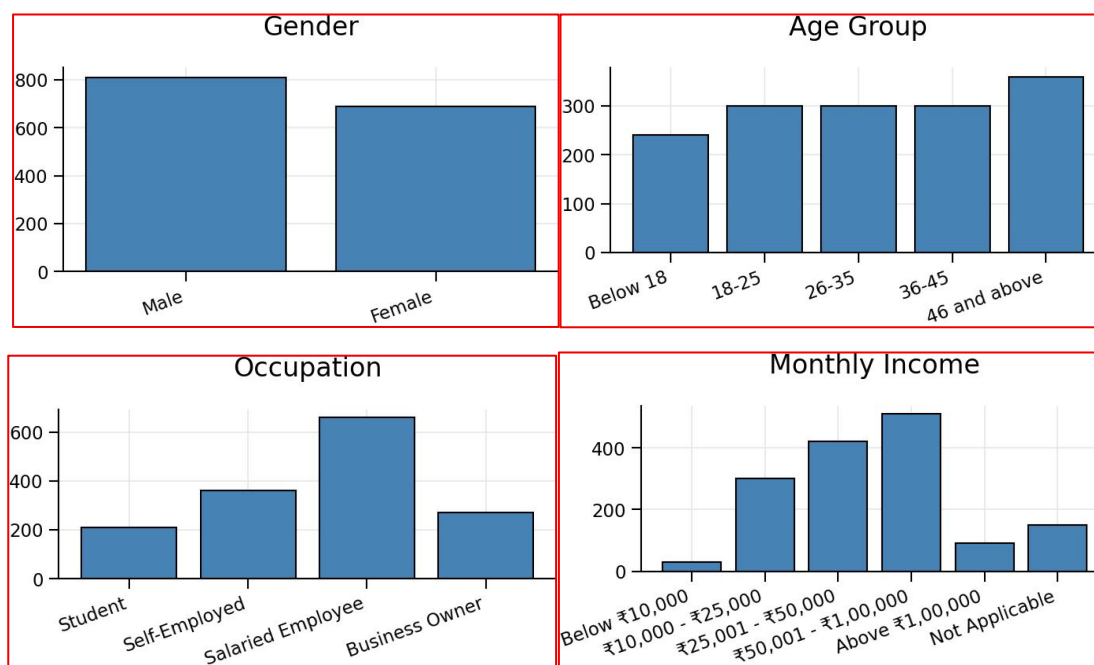


Figure 2. Demographic characteristics of the respondents (N = 1,500) by age group, gender, occupation, and monthly income.

Source: Authors' field survey (2025).

Figure 2 illustrate demographic characteristic of 1,500 respondent surveyed in Shimla and Dharamshala, Himachal Pradesh, based on age group, gender, occupation and monthly income. Sample exhibit considerable demographic diversity, providing a comprehensive representation of mobile telecom user across different socio-economic segment. Respondent aged 46 years and above are largest age group (24.0%), followed by 18–25 years, 26–35 years and 36–45 years (each 20.0%), while respondent below 18 years accounted for 16.0% of sample. The gender distribution was relatively balanced, comprising 54.0% males and 46.0% females. In terms of occupation, salaried employees represent largest proportion (44.0%), self-employed respondent (24.0%), business owner (18.0%) and student (14.0%). Regarding monthly income, largest share of respondent (34.0%) reported earning between ₹50,001 and ₹1,00,000, followed by ₹25,001–₹50,000 (28.0%) and ₹10,000–₹25,000 (20.0%), while 10.0% belonged to non-income category, primarily student and individual without regular earning.

The demographic composition reflects a broad cross-section of telecom consumer, enhancing representativeness and robustness of study. Inclusion of respondent from diverse age, occupational and income group provides a reliable basis for examining variation in consumer behaviour and perception of competitive transformation associated with Reliance Jio in telecommunication sector.

Table1. Association between Age Group and Current Telecom Operator Used

Age Group (Years)	Jio	Airtel	Vi	BSNL	Other	Total
Below 18	240 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	240
18–25	210 (70.0)	30 (10.0)	30 (10.0)	30 (10.0)	0 (0.0)	300
26–35	210 (70.0)	30 (10.0)	0 (0.0)	60 (20.0)	0 (0.0)	300
36–45	240 (80.0)	0 (0.0)	0 (0.0)	60 (20.0)	0 (0.0)	300
46 years and above	270 (75.0)	30 (8.3)	0 (0.0)	30 (8.3)	30 (8.3)	360
Total	1,170 (78.0)	90 (6.0)	30 (2.0)	180 (12.0)	30 (2.0)	1,500 (100.0)

Note: Values are expressed as frequency (row percentage). Pearson's Chi-square test indicated a statistically significant association between respondents' age group and their current telecom operator ($\chi^2 = 352.885$, df = 16, $p < 0.001$).

Source: Authors' field survey (2025).

Table 1 represent association between respondents' age group and their current telecom operator. Reliance Jio emerged as predominant service provider across all age categories, accounting for 78.0% of total sample. Its highest adoption was observed among respondent below 18 years, where all participant (100.0%) reported using Jio. Among the 18–25 years and 26–35 years groups, Jio maintained a market share of 70.0%, while its usage increased to 80.0% among respondents aged 36–45 years and high at 75.0% among those 46 years and above. BSNL represented second most preferred operator (12.0% overall), with comparatively higher usage among respondent aged 26–35 years and 36–45 years (20.0% each). Airtel accounted for 6.0% of total respondent, whereas Vi and other operator had only a marginal presence (2.0% each). Pearson's Chi-square test ($\chi^2 = 352.885$, $df = 16$, $p < 0.001$) indicate statistically significant association between age group and current telecom operator usage, suggesting consumer preference for telecom service provider vary significantly in various age segment.

Table2. Association between Age Group and Ever Use of Reliance Jio Services

Age Group (Years)	Yes	No	Total
Below 18	240 (100.0)	0 (0.0)	240
18–25	240 (80.0)	60 (20.0)	300
26–35	300 (100.0)	0 (0.0)	300
36–45	240 (80.0)	60 (20.0)	300
46 years and above	330 (91.7)	30 (8.3)	360
Total	1,350 (90.0)	150 (10.0)	1,500 (100.0)

Note: Values are expressed as frequency (row percentage). Pearson's Chi-square test revealed a statistically significant association between respondents' age group and the use of Reliance Jio services ($\chi^2 = 127.778$, $df = 4$, $p < 0.001$).

Source: Authors' field survey (2025).

Table 2 shows association between respondent age group and their experience of using Reliance Jio service. 90.0% of respondent reported using Jio, indicating massive adoption across population. Highest adoption was among respondent below 18 years and 26–35 years, where all participant (100.0%) use Jio service. A substantial proportion of respondent aged 46 years and above (91.7%) reported using Jio, while 80.0% of respondent in 18–25 years and 36–45 years category used Jio. Pearson's Chi-square test shows statistical association between age group and Jio service use ($\chi^2 = 127.778$, $df = 4$, $p < 0.001$), indicating that Jio adoption varies significantly across different age group. These findings suggest that Reliance Jio has achieved broad market penetration across all age group, although extent of adoption differs significantly by age.

Table 3. Association Between Age Group and Type of Mobile Connection Used (N = 1,500)

Age Group (Years)	Prepaid	Postpaid	Total
Below 18	240 (100.0)	0 (0.0)	240
18–25	240 (80.0)	60 (20.0)	300
26–35	240 (80.0)	60 (20.0)	300
36–45	270 (90.0)	30 (10.0)	300
46 years and above	360 (100.0)	0 (0.0)	360
Total	1,350 (90.0)	150 (10.0)	1,500 (100.0)

Note: Values are expressed as frequency (row percentage). Pearson's Chi-square test indicated a statistically significant association between respondents' age group and the type of mobile connection used ($\chi^2 = 133.333$, $df = 4$, $p < 0.001$). All expected cell frequencies met the assumptions of the Chi-square test.

Source: Authors' field survey (2025).

Table 3 shows association between respondents' age group and type of mobile connection used. 90.0% of respondent preferred prepaid connection, while only 10.0% used post- paid service indicating a strong preference for prepaid plan across study population. Prepaid use was universal among respondent below 18 years and 46 years above (100.0% each). Among respondent aged 18–25 years and 26–35 years, 80.0% used prepaid connection and 20.0% opted for post-paid service. In 36–45 years age group, prepaid connection accounted for 90.0%, compared with

10.0% for post-paid connection. The Pearson's Chi-square test revealed a statistically significant association between age group and type of mobile connection used ($\chi^2 = 133.333$, $df = 4$, $p < 0.001$), indicating that preference for prepaid and post-paid service differ significantly across age group.

Table4. Association between Age Group and Primary Purpose of Using Mobile Services

Age Group (Years)	Calling	Internet Browsing	All of the Above	Total
Below 18	30 (12.5)	0 (0.0)	210 (87.5)	240
18–25	90 (30.0)	60 (20.0)	150 (50.0)	300
26–35	90 (30.0)	0 (0.0)	210 (70.0)	300
36–45	0 (0.0)	0 (0.0)	300 (100.0)	300
46 years and above	30 (8.3)	0 (0.0)	330 (91.7)	360
Total	240 (16.0)	60 (4.0)	1,200 (80.0)	1,500 (100.0)

Note: Values are presented as frequency (row percentage). Pearson's Chi-square test revealed a statistically significant association between respondents' age group and the primary purpose of using mobile services ($\chi^2 = 436.875$, $df = 8$, $p < 0.001$). All expected cell frequencies exceeded the minimum recommended value for the Chi-square test.

Source: Authors' field survey (2025).

Table 4 examine association between respondents' age group and primary purpose of using mobile service. Overall, 80.0% of respondent reported using mobile service for multiple purpose (calling and internet-related activities), while 16.0% primarily used them for calling and only 4.0% for internet browsing. Use of mobile service for multiple purpose was highest among respondent aged 36–45 years (100.0%), followed by 46 years and above (91.7%), below 18 years (87.5%) and 26–35 years (70.0%). Among respondent aged 18–25 years, half (50.0%) used mobile service for multiple purpose, whereas 30.0% primarily use for calling and 20.0% mainly for internet browsing. The Pearson's Chi-square test indicated a statistically significant association between age group and primary purpose of using mobile service ($\chi^2 = 436.875$, $df = 8$, $p < 0.001$), suggesting that mobile use pattern vary significantly across different age group.

Table5. Association between Age Group and the Main Reason for Choosing Reliance Jio

Age Group (Years)	Affordable Data Plans	Free Voice Calls	High-Speed Internet	Network Coverage	Total
Below 18	30 (12.5)	0 (0.0)	150 (62.5)	60 (25.0)	240
18–25	60 (20.0)	0 (0.0)	120 (40.0)	120 (40.0)	300
26–35	60 (20.0)	30 (10.0)	150 (50.0)	60 (20.0)	300
36–45	30 (10.0)	60 (20.0)	150 (50.0)	60 (20.0)	300
46 years and above	0 (0.0)	0 (0.0)	60 (16.7)	300 (83.3)	360
Total	180 (12.0)	90 (6.0)	630 (42.0)	600 (40.0)	1,500 (100.0)

Note: Values are expressed as frequency (row percentage). Pearson's Chi-square test indicated a statistically significant association between respondents' age group and the main reason for choosing Reliance Jio ($\chi^2 = 567.202$, $df = 12$, $p < 0.001$). All expected cell frequencies satisfied the assumptions of the test.

Source: Authors' field survey (2025).

Table 5 exhibits association between age group of responded and main reason for choosing Reliance Jio. High-speed internet emerged as most influential factor (42.0%), followed by network coverage (40.0%), whereas affordable data plan (12.0%) and free voice call (6.0%) was cited less frequently. Respondent below 18 years preferred Jio for high-speed internet (62.5%), while 18–25 years equally valued high-speed internet and network coverage (40.0% each). Among 26–35 years and 36–45 years group, high-speed internet remained leading reason (50.0% each). In contrast, respondent 46 years and above selected Jio due to its network coverage (83.3%). The Pearson's Chi-square test demonstrated statistically significant association between age group and primary reason for choosing Reliance Jio (χ^2

= 567.202, df = 12, $p < 0.001$), indicating factors influencing consumers' choice of Jio differ significantly across age group.

Table 6. Association Between Age Group and Satisfaction with Reliance Jio's Service Quality

Age Group (Years)	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	Total
Below 18	150 (62.5)	60 (25.0)	0 (0.0)	0 (0.0)	30 (12.5)	240
18–25	90 (30.0)	90 (30.0)	90 (30.0)	0 (0.0)	30 (10.0)	300
26–35	120 (40.0)	60 (20.0)	30 (10.0)	30 (10.0)	60 (20.0)	300
36–45	120 (40.0)	90 (30.0)	30 (10.0)	30 (10.0)	30 (10.0)	300
46 years and above	270 (75.0)	90 (25.0)	0 (0.0)	0 (0.0)	0 (0.0)	360
Total	750 (50.0)	390 (26.0)	150 (10.0)	60 (4.0)	150 (10.0)	1,500 (100.0)

Note: Values are presented as frequency (row percentage). Pearson's Chi-square test indicated a statistically significant association between respondents' age group and their level of satisfaction with Reliance Jio's service quality ($\chi^2 = 434.077$, df = 16, $p < 0.001$). All expected cell frequencies met the assumptions of the Chi-square test.

Source: Authors' field survey (2025).

Table 6 represents association between respondent age group and their satisfaction with Reliance Jio service quality. 50.0% of respondent were very satisfied and 26.0% were satisfied, indicating a positive perception for service quality of Jio. Highest level of very satisfied response was recorded among respondent 46 years and above (75.0%), followed by those below 18 years (62.5%). In 26–35 years and 36–45 years age group, 40.0% of respondent reported being very satisfied, while 18–25 years group showed an equal distribution of very satisfied, satisfied and neutral response (30.0% each). Dissatisfaction level remained relatively low across all age group. Pearson's Chi-square test revealed a statistically significant association between age group and satisfaction with service quality of Reliance Jio ($\chi^2 = 434.077$, df = 16, $p < 0.001$), indicating satisfaction level varies significantly across different age segment.

Table 7. Association between Age Group and Perception of Jio's Network Coverage (N = 1,500)

Age Group (Years)	Excellent	Good	Average	Poor	Total
Below 18	120 (50.0)	60 (25.0)	30 (12.5)	30 (12.5)	240
18–25	120 (40.0)	150 (50.0)	30 (10.0)	0 (0.0)	300
26–35	120 (40.0)	90 (30.0)	90 (30.0)	0 (0.0)	300
36–45	120 (40.0)	90 (30.0)	60 (20.0)	30 (10.0)	300
46 years and above	120 (33.3)	90 (25.0)	60 (16.7)	90 (25.0)	360

Note: Values are presented as frequency (row percentage). Pearson's Chi-square test revealed a statistically significant association between respondents' age group and their perception of Jio's network coverage ($\chi^2 = 232.535$, df = 12, $p < 0.001$). All expected cell frequencies exceeded the minimum recommended threshold for the Chi-square test.

Source: Authors' field survey (2025).

Table 7 shows association between respondent age group and their perception of Reliance Jio's network coverage. Respondent reported a favourable opinion of Jio's network performance, with excellent and good rating accounting for majority of response across all age group. Respondent below 18 years recorded highest proportion of excellent rating (50.0%), while those aged 18–25 years most frequently rated network as good (50.0%). Among 26–35 years and 36–45 years group, 40.0% rated network as excellent, although a considerable proportion perceive it as average. In contrast, respondent 46 years and above reported comparatively lower satisfaction having 25.0% rating network as poor. Pearson's Chi-square test indicated a statistically significant association between age group and perception of Jio's network coverage ($\chi^2 = 232.535$, df = 12, $p < 0.001$), suggesting that perception of network quality differ prominently across age group.

Table8. Association between Age Group and the Influence of Reliance Jio on Mobile Data Usage

Age Group (Years)	Increased Significantly	Increased Moderately	No Change	Decreased	Total
Below 18	120 (50.0)	90 (37.5)	0 (0.0)	30 (12.5)	240
18–25	180 (60.0)	60 (20.0)	60 (20.0)	0 (0.0)	300
26–35	150 (50.0)	150 (50.0)	0 (0.0)	0 (0.0)	300
36–45	30 (10.0)	150 (50.0)	120 (40.0)	0 (0.0)	300
46 years and above	210 (58.3)	120 (33.3)	30 (8.3)	0 (0.0)	360
Total	690 (46.0)	570 (38.0)	210 (14.0)	30 (2.0)	1,500 (100.0)

Note: Values are expressed as frequency (row percentage). Pearson's Chi-square test indicated a statistically significant association between respondents' age group and the influence of Reliance Jio on mobile data usage ($\chi^2 = 555.410$, $df = 12$, $p < 0.001$). The assumptions of the test were met, with only one cell (5.0%) having an expected frequency below five (minimum expected count = 4.80).

Source: Authors' field survey (2025).

Table 8 demonstrates association between respondent age group and influence of Reliance Jio on mobile data usage. 46.0% of respondent reported significant increase in mobile data use, while 38.0% experienced moderate increase, indicating that Jio has substantially influenced data consumption pattern. A significant increase in data usage was most commonly reported by respondent aged 18–25 years (60.0%) and 46 years and above (58.3%), whereas respondent aged 26–35 years equally reported significant and moderate increase (50.0% each). Among 36–45 years group, 50.0% experienced a moderate increase and 40.0% reported no change in data usage. Only 2.0% of total respondent indicated decrease in data usage. Pearson's Chi-square test exhibits a statistically significant association between age group and influence of Reliance Jio on mobile data usage ($\chi^2 = 555.410$, $df = 12$, $p < 0.001$), suggesting that impact of Jio on data consumption differ significantly across age group.

Table9. Association between Age Group and Switching from another Telecom Operator to Reliance Jio

Age Group (Years)	Yes	No	Total
Below 18	90 (37.5)	150 (62.5)	240
18–25	150 (50.0)	150 (50.0)	300
26–35	120 (40.0)	180 (60.0)	300
36–45	180 (60.0)	120 (40.0)	300
46 years and above	180 (50.0)	180 (50.0)	360
Total	720 (48.0)	780 (52.0)	1,500 (100.0)

Note: Values are expressed as frequency (row percentage). Pearson's Chi-square test indicated a statistically significant association between respondents' age group and switching from another telecom operator to Reliance Jio ($\chi^2 = 36.659$, $df = 4$, $p < 0.001$). All expected cell frequencies satisfied the assumptions of the test.

Source: Authors' field survey (2025).

Table 9 shows association between respondent age group and porting from another telecom operator to Reliance Jio. 48.0% of respondent reported switching to Jio from another telecom operator, while 52.0% indicated no switch. Highest switching rate was observed among respondent aged 36–45 years (60.0%), followed by 18–25 years and 46 years and above group, where 50.0% of respondent had switched to Jio. Respondent below 18 years recorded lowest switching rate (37.5%), with majority (62.5%) reporting not changing telecom operator. Pearson's Chi-square test demonstrates statistically significant association between age group and switching to Reliance Jio ($\chi^2 = 36.659$, $df = 4$, $p < 0.001$), indicating that switching behaviour varies across different age group.

Table10. Association between Age Group and Previous Telecom Operator before Switching to Reliance Jio (N = 780)

Age Group (Years)	Airtel	Vi (Vodafone-Idea)	BSNL	Total
Below 18	30 (33.3)	60 (66.7)	0 (0.0)	90
18–25	30 (20.0)	30 (20.0)	90 (60.0)	150
26–35	30 (25.0)	0 (0.0)	90 (75.0)	120
36–45	60 (33.3)	30 (16.7)	90 (50.0)	180
46 years and above	0 (0.0)	90 (37.5)	150 (62.5)	240
Total	150 (19.2)	210 (26.9)	420 (53.9)	780 (100.0)

Note: Values are expressed as frequency (row percentage). The analysis includes only respondents who switched from another telecom operator to Reliance Jio (N = 780). Pearson's Chi-square test revealed a statistically significant association between respondents' age group and their previous telecom operator before switching to Reliance Jio ($\chi^2 = 244.307$, $df = 8$, $p < 0.001$). All expected cell frequencies met the assumptions of the Chi-square test.

Source: Authors' field survey (2025).

Table 10 provide data of previous telecom operator of respondent who switched to Reliance Jio (N = 780). BSNL was most common previous service provider, accounting for 53.9% of switcher, followed by Vi (Vodafone-Idea) (26.9%) and Airtel (19.2%). Among respondent aged 18–25 years, 26–35 years, 36–45 years and 46 years and above, BSNL was predominant operator before switching to Jio, with highest proportion observed in 26–35 years age group (75.0%). Respondent below 18 years most frequently switched from VI (Vodafone-Idea) (66.7%). The finding indicates that Reliance Jio attracted subscribers from all major telecom operators, with BSNL contributing largest share of switchers across most age group.

Table11. Association between Age Group and Willingness to Recommend Reliance Jio to Others

Age Group (Years)	Yes	No	Total
Below 18	210 (87.5)	30 (12.5)	240
18–25	180 (60.0)	120 (40.0)	300
26–35	180 (60.0)	120 (40.0)	300
36–45	270 (90.0)	30 (10.0)	300
46 years and above	120 (33.3)	240 (66.7)	360
Total	960 (64.0)	540 (36.0)	1,500 (100.0)

Note: Values are expressed as frequency (row percentage). Pearson's Chi-square test indicated a statistically significant association between respondents' age group and their willingness to recommend Reliance Jio to others ($\chi^2 = 296.658$, $df = 4$, $p < 0.001$). All expected cell frequencies satisfied the assumptions of the test.

Source: Authors' field survey (2025).

Table 11 reports association between respondent age group and their willingness to recommend Reliance Jio to other. 64.0% of respondent expressed willingness to recommend Jio, while 36.0% were not willing to do so, indicating a generally favourable perception of service. The highest willingness to recommend Jio was observed among respondent aged 36–45 years (90.0%), followed by below 18 years (87.5%). Only 33.3% of respondent 46 years and above were willing to recommend Jio, with majority (66.7%) expressing unwillingness. Respondent in 18–25 years and 26–35 years age group reported identical recommendation rate (60.0%). Pearson's Chi-square test indicated statistically significant association between age group and willingness to recommend Reliance Jio ($\chi^2 = 296.658$, $df = 4$, $p < 0.001$), suggesting recommendation intention of consumer differ significantly across age group.

Table12. Association between Age Group and Perceived Impact of Reliance Jio on Competing Telecom Operators

Age Group (Years)	Increased Competition, Leading to Better Services	Forced Competitors to Lower Prices	Led to Mergers and Market Exits	No Major Impact	Total
Below 18	150 (62.5)	90 (37.5)	0 (0.0)	0 (0.0)	240
18–25	150 (50.0)	60 (20.0)	60 (20.0)	30 (10.0)	300
26–35	120 (40.0)	60 (20.0)	90 (30.0)	30 (10.0)	300
36–45	60 (20.0)	120 (40.0)	90 (30.0)	30 (10.0)	300
46 years and above	240 (66.7)	60 (16.7)	60 (16.7)	0 (0.0)	360
Total	720 (48.0)	390 (26.0)	300 (20.0)	90 (6.0)	1,500 (100.0)

Note: Values are expressed as frequency (row percentage). Pearson's Chi-square test revealed a statistically significant association between respondents' age group and their perception of Reliance Jio's impact on competing telecom operators ($\chi^2 = 285.088$, $df = 12$, $p < 0.001$). All expected cell frequencies met the assumptions of the Chi-square test.

Source: Authors' field survey (2025).

Table 12 shows association between respondent age group and perception of Reliance Jio's impact on competing telecom operator. 48.0% of respondent believed that Jio intensified competition, leading to better services, whereas 26.0% perceived that it forced competitor to reduce price. 20.0% felt that Jio contributed to merger and market exit, whereas only 6.0% reported no major impact. Respondent below 18 years (62.5%) and 46 years and above (66.7%) predominantly believed that Jio increased competition and improved service quality. Respondent aged 36–45 years most frequently viewed Jio's impact as compelling competitor to reduce price (40.0%). Pearson's Chi-square test revealed statistically significant association between age group and perception of Jio's impact on competing telecom operator ($\chi^2 = 285.088$, $df = 12$, $p < 0.001$), indicating opinion regarding Jio's competitive influence vary noticeably across different age group.

Table13. Association between Age Group and Preferred Reliance Jio Service Attribute Compared with Other Telecom Providers (N = 1,500)

Age Group (Years)	Pricing	Network Coverage	Internet Speed	Total
Below 18	30 (12.5)	180 (75.0)	30 (12.5)	240
18–25	0 (0.0)	120 (40.0)	180 (60.0)	300
26–35	90 (30.0)	60 (20.0)	150 (50.0)	300
36–45	30 (10.0)	150 (50.0)	120 (40.0)	300
46 years and above	120 (33.3)	150 (41.7)	90 (25.0)	360
Total	270 (18.0)	660 (44.0)	570 (38.0)	1,500 (100.0)

Note: Values are expressed as frequency (row percentage). Pearson's Chi-square test revealed a statistically significant association between respondents' age group and their preferred service attribute of Reliance Jio ($\chi^2 = 342.378$, $df = 8$, $p < 0.001$). All expected cell frequencies met the assumptions of the Chi-square test.

Source: Authors' field survey (2025).

Table 13 demonstrates association between respondent age group and their preferred Reliance Jio service attribute in comparison to another telecom provider. Network coverage emerged as most preferred attribute (44.0%), then internet speed (38.0%), while pricing was identified by only 18.0% of respondent. Respondent below 18 years showed strongest preference for network coverage (75.0%), whereas 18–25 years (60.0%) and 26–35 years (50.0%) primarily valued internet speed. Among respondent aged 36–45 years, network coverage remained leading preference (50.0%), while respondent 46 years and above favoured network coverage (41.7%), pricing (33.3%). Pearson's Chi-square test revealed significant association between age group and preferred service attribute of

Reliance Jio ($\chi^2 = 342.378$, $df = 8$, $p < 0.001$), indicating consumer priorities regarding Jio's service attributes differ significantly across age group.

Table14. Association between Age Group and Perception of Reliance Jio's Contribution to the Improvement of the Indian Telecommunications Industry

Age Group (Years)	Strongly Agree	Agree	Neutral	Total
Below 18	150 (62.5)	90 (37.5)	0 (0.0)	240
18–25	90 (30.0)	120 (40.0)	90 (30.0)	300
26–35	150 (50.0)	120 (40.0)	30 (10.0)	300
36–45	240 (80.0)	60 (20.0)	0 (0.0)	300
46 years and above	60 (16.7)	150 (41.7)	150 (41.7)	360
Total	690 (46.0)	540 (36.0)	270 (18.0)	1,500 (100.0)

Note: Values are expressed as frequency (row percentage). Pearson's Chi-square test indicated a statistically significant association between respondents' age group and their perception of Reliance Jio's contribution to improving the Indian telecommunications industry ($\chi^2 = 445.924$, $df = 8$, $p < 0.001$). All expected cell frequencies satisfied the assumptions of the test.

Source: Authors' field survey (2025).

Table 14 exhibits association between respondent age group and their perception of Reliance Jio's contribution to improvement of Indian telecommunication industry. 46.0% of respondent strongly agreed and 36.0% agreed that Jio has positively contributed to development of Indian telecom sector, while 18.0% remained neutral. Strongest positive perception was observed among respondent aged 36–45 years, with 80.0% strongly agreeing that Jio has improved industry. 62.5% of respondent below 18 years and 50.0% of 26–35 years strongly endorsed Jio's contribution. Respondent 46 years and above were comparatively neutral, with 41.7% selecting neutral response. Pearson's Chi-square test revealed statistically significant association between age group and perception of Jio's contribution to Indian telecommunication industry ($\chi^2 = 445.924$, $df = 8$, $p < 0.001$), indicating that opinion regarding Jio's role in transforming telecom sector vary prominently across different age group.

5. MAJOR FINDINGS

The empirical study shows that Reliance Jio has become the leading telecom service provider in Himachal Pradesh with nearly four-fifths of the respondents opting for its services. The large share of respondents who have used Jio before, shows how far it has penetrated the market and been accepted by the consumers. The study further finds that there is a significant effect of age on telecom preferences, service adoption, usage behaviour, satisfaction and market competition perceptions as evidenced by statistically significant Chi-square results for all variables ($p < 0.001$).

The results suggest prepaid mobile connections continue to be the consumer's preferred option, highlighting the significance of affordability and flexibility in the Indian telecom market. Mobile services are not just limited to voice and most respondents use their connections for multiple purposes such as internet browsing, digital payments, entertainment, education and social networking. This demonstrates the shift from traditional telecommunications to a digitally interconnected communication system.

The most important factors affecting the choice of Reliance Jio by consumers are found to be high-speed internet and network coverage; the traditional price-related factors such as cheap tariffs and free voice calling are not the most important. This finding is indicative of a growing consumer trend toward selecting a telecom operator based on the quality of service and network performance rather than solely on economic considerations.

Customer satisfaction with Reliance Jio was generally rated high with over three-fourths of the respondents being satisfied with its overall service quality. Perceptions of Jio's network coverage were similarly positive, with most respondents rating it as either excellent or good, although perceptions differed among age groups. The study also indicates that the entry of Jio has boosted usage of mobile data by consumers in a big way, thus proving its transformational impact in accelerating digital adoption and internet availability.

The switching behaviour of consumers is a good reflection of the competitive impact of Reliance Jio. Almost half of the respondents have reported switching from their previous telecom operator to Jio. BSNL had the highest share of

switchers followed by VI and Airtel. Moreover, most of the respondents were likely to recommend Jio to others, which show a positive customer satisfaction and positive word of mouth behaviour.

Finally, the respondents felt overwhelmingly that Reliance Jio has increased competition in the Indian telecommunications industry by improving the quality of services, triggering price reductions, improving digital connectivity and spurring technological innovation. Findings suggest that Reliance Jio has not only changed the behaviour of consumers but also disrupted the competitive dynamics of the Indian telecom industry.

6. RECOMMENDATIONS

The study findings provide the following recommendations for telecom service providers, policy makers and regulators.

Telecom operators need to continue investing in high speed internet infrastructure and network expansion, especially in rural and geographically difficult area of Himachal Pradesh where connectivity gap still exist. Other than service quality and pricing, telecom firms should focus on network reliability, seamless connectivity and consistent internet speed rather than competing on tariff. Operator should focus on age-specific marketing as consumer preference varies across age group. Reliable network coverage appeal to older user, while younger consumers are interested in internet speed and digital service.

Telecom operator needs to improve Customer Relationship Management (CRM) system to maintain customer satisfaction as well as loyalty with instant customer support, fast complaint resolution and active service monitoring. Government and Telecom Regulatory Authority of India (TRAI) should continue to implement healthy competition in market, ensuring fair pricing, better service standard and equal access to digital infrastructure in urban and rural area.

Telecom operator should introduce new value-added service such as digital financial service, cloud storage, cyber security solution, telemedicine support and AI-driven customer support to increase consumer engagement and retention. Special attention should be given to online literacy programs, particularly for older consumers, so as to maximize the benefits of digital transformation and improve the adoption of advanced telecom services. India's Digital India initiative should also be leveraged to support future telecom investments in 5G deployment, fibre-optic expansion and emerging digital technologies that can further fortify India's economy and make development sustainable.

7. CONCLUSION

The study gives empirical evidence that Reliance Jio has significantly modified competitive landscape and consumer behaviour of Indian telecom industry. The results indicate that Jio has emerged as the market leader due to its high adoption, better network performance, high speed internet services and customer satisfaction. More importantly, the study confirms the important function of age in determining the preferences, usage patterns, switching behaviour, satisfaction levels and perceptions on industry transformation of telecom services. The study also shows Reliance Jio has changed the very basis of competition in the telecom sector. There has been a shift in the market away from competition based on price alone and a greater emphasis placed on quality of service, digital connectivity, network reliability and technological innovation. Sudden rise in mobile data consumption and general perception that Jio enhanced competition and service standard represents its pivotal role in digital transformation journey of India.

This study contributes to literature on consumer behaviour and competitive strategy by showing how disruptive innovation could change consumer preference and market structure in highly competitive service industry. In practical terms, the findings provide useful insights for telecom operators, regulators, and policymakers wishing to improve customer satisfaction, strengthen digital infrastructure, and promote sustainable competition. The study is confined to the respondents from Himachal Pradesh, but the findings have significant implications for understanding consumer behaviour in emerging digital markets. Future research can extend the study to other Indian states, use longitudinal data or study the effect of emerging technologies like 5G, artificial intelligence and internet of things (IoT) on consumer decision making and competitive transformation in the telecommunication industry. To summarize, the study finds that Reliance Jio has not only changed consumer preferences but also accelerated the modernization, competitiveness and digital evolution of the Indian telecommunications industry.

8. REFERENCES

1. Aggarwal, A. (2021). Competitive disruption and pricing strategies in the Indian telecom sector. *Telecommunications Policy*, 45(3), 201–215.
2. Ansari, Z., & Misra, M. S. (2020). An empirical study of consumer preferences towards Reliance Jio. *Industry*, 4, 2019–2020.
3. Arora, S., & Kumar, R. (2022). Consumer preference shifts in the Indian telecom industry: Evidence from the post-Jio era. *International Journal of Consumer Studies*, 46(2), 345–358.
4. Baba, M. A., & Haq, Z. U. (2025). Competition to monopoly: A case of Indian telecom sector. *Journal of International Economics*, 16(1), 88–97.
5. Bharadwaj, A., El Sawy, O., Pavlou, P., & Venkatraman, N. (2013). Digital business strategy: Toward a next generation of insights. *MIS Quarterly*, 37(2), 471–482.
6. Bhatia, J., & Palepu, A. R. (2016). Reliance Jio: Predatory pricing or predatory behaviour? *Economic and Political Weekly*, 33–39.
7. Chovatiya, D. (2023). An analytical study on Reliance Jio's contribution to India's telecommunication market. *ResearchGate*.
8. Curwen, P. (2018). Reliance Jio forces the Indian mobile market to restructure: A regular column on the information industries. *Digital Policy, Regulation and Governance*, 20(1), 99–102.
9. Department of Telecommunications (DoT). (2024). *Annual report 2023–24*. Government of India. <https://dot.gov.in>
10. GSMA. (2023). *The mobile economy Asia Pacific 2023*. GSM Association. <https://www.gsma.com>
11. Gupta, A., Raghav, K., & Dhakad, P. (2019). The effect on the telecom industry and consumers after the introduction of Reliance Jio. *International Journal of Engineering and Management Research*, 9(3), 118–123.
12. Jain, P. (2020). *Disrupting the Indian telecom industry: An analytical research on Reliance Jio network* (Master's thesis, ISCTE–Instituto Universitario de Lisboa).
13. Katz, R. L., & Berry, T. A. (2014). *Driving demand for broadband networks and services*. Springer International Publishing.
14. Lonare, A., Swamy, R., Shrivastava, S., & Shah, V. (2018). A study on the effect of launch of Reliance Jio on other telecommunication service providers in India. *Pacific Business Review International*, 11(5).
15. Malhotra, R. (n.d.). *Study on consumer behaviour towards Reliance Jio* (Doctoral dissertation, University of Mumbai).
16. Mawandia, S., & Modi, S. A. (2021). Analyzing the impact of Reliance Jio on the telecom sector of India. *International Journal of Social Science and Economic Research*, 6(7), 1234–1246.
17. McDowell, S. D., & Nair, S. (2010). Advanced wireless services: Challenges for telecommunications policy and regulation in India. *Media Asia*, 37(2), 59–66.
18. Parsheera, S., & Trehan, V. (2022). A structural analysis of the mobile telecommunications market: Exploring the Jio effect. In *The philosophy and law of information regulation in India*.
19. Rishi, B., Kacker, A., & Gupta, S. (2018). Entry of Reliance Jio in the telecom industry: A ripple in the ocean. *Emerald Emerging Markets Case Studies*, 1–17.
20. Rudramurthy, V., & Sendhil Kumar, M. (2019). An empirical study on consumer expectation and satisfaction towards Jio phone with reference to Reliance Jio center Tumkur.
21. Sahay, U., & Kaur, G. (2022). An empirical study of telecom companies of North India. In *Electronic systems and intelligent computing: Proceedings of ESIC 2021* (p. 139).
22. Singh, D. (2004). *A primer on Indian telecommunications sector*. Asian Institute of Transport Development.
23. Singh, M., & Kumar, A. (2025). The telecommunication engine of India's streaming market: Reliance Jio's vertical integration amidst regulatory silence. *Journal of Digital Media & Policy*.
24. Singh, R., Chawla, B., Kang, P., & Pal, K. (2015). Consumer behavior towards mobile phone operators in North India. *SSRN Electronic Journal*.
25. Tangirala, M. P. (2019). *Telecom sector regulation in India: An institutional perspective*. Routledge India.
26. Varghese, S. (2006). Reliance Infocomm's strategy and impact on the Indian mobile telecommunication scenario. *Media@LSE*. <http://www.lse.ac.uk/collections/media@lse/pdf/Varghese%20paper>