

# An Analysis of Consumer Decision-Making Toward BSNL Telecom Services in Karnataka

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## Abstract

The Indian telecom sector has developed rapidly due to intense competition, technological convergence, aggressive pricing strategies, and the increasing dominance of private telecom operators, particularly within data-driven telecom services and digital ecosystems. Straddling the competition is Bharat Sanchar Nigam Limited (BSNL): being a government-owned Public Sector Undertaking provides it the responsibility of fulfilling the Universal Service Obligation. This responsibility includes the Affordability Obligation, the Rural Penetration Obligation, and Digital Inclusion, particularly within the region's Karnataka's geographically dispersed Rural Areas. Therefore, the present conceptual research paper, within the context of the rapid evolution of the Indian telecom sector, aims to analyze consumer decision-making within the sphere of BSNL Telecom services in the state of Karnataka and provide a comprehensive response to the factors influencing consumer choice and preferences to the multitude of BSNL services offered within the context of Dynamic Market Competition, and in this particular context, the pricing constructs of affordability, service quality, network coverage, rural access, brand trust, the perceived value of Government services, digital inclusion, and the place of BSNL services within Rural Areas. Consumers of Public Sector Telecom services do not only consider the functional aspects of the services offered, but also the social and economic aspects, the trust in institutions, and the value the service renders to the public. This study aims to provide a conceptual framework of the index of factors that contribute jointly to the phenomenon of consumer adoption and sustained usage of BSNL services, particularly when considering the prevalent private telecom operators as competitors. Considering the available theoretical models concerning consumer decision-making, perceived service quality, and brand trust in the domains of telecom and public sector service delivery, the proposed research employs a conceptual approach based on a comprehensive review and synthesis of the secondary research evidence obtained from peer-reviewed scholarly articles, governmental publications, telecom regulator documents, and multiple industry reports. This process resulted in the construction of a detailed conceptual model that connects the principal independent variables— pricing and fairness, service reliability and quality, network coverage and availability, customer service, trust in the public sector ownership, provision of services in the rural areas — to the dependent variable of consumer decision-making regarding BSNL services. Given the above, the research aims to make the meritorious attempt to address the identified gaps in the prevailing literature by presenting a theory-based model to advance the understanding of consumer behavior in the public sector telecom services in the given region and providing a set of recommendations to BSNL and the public sector decision-makers to facilitate the alignment of service delivery models to the needs of the consumers. Additionally, it aims to provide a conceptual basis for future research to assess the determinants of consumer preferences, the sustainability of the public sector telecom service, and the availability of digital services in a just manner within Karnataka and other developing telecom service economies.

**Keywords:** BSNL, Consumer Decision-Making, Telecom Services, Customer Preference, Public Sector Telecom, Karnataka

## Introduction and Background related to the study

The Indian telecommunications market has developed into one of the most rapidly evolving and expanding industries in the world, which unsurprisingly has robust subscriber growth, increased infrastructure funding, and exponential growth in the adoption of digital services. Data from Mordor Intelligence and IBEF (2025) estimates the Indian

telecommunications sector will reach \$153.83 billion by 2025. This further corroborates the claim that the Indian telecommunications sector is rapidly evolving and growing, especially with the adoption of digital services. It claims the Indian telecommunications sector is a major player in the global telecommunications market due to its digital economic growth. Within the sector, BSNL and other public sectors have played a vital role in the growing industry by providing affordable telephony and internet services in both urban and rural areas of India. They have also fulfilled their client obligations by providing internet services in economically unviable remote areas, where the majority of the networks, the public policy with private sector telecommunications operators, are unprofitable. Despite the telecommunications industry being characterized by intense competition, rapid technological shifts to 5G and consumer expectations that prioritize quality, coverage, price, and service. Restructuring of government telecom departments in 2000 which provided basic telecommunication services in India and an essential part of India's telecommunications infrastructure with national coverage and extensive fiber optics and landline services and more recently undertaken large scale projects, like the nationwide 4G rollout incorporating indigenous technology and the expansion of tower installation to strengthen coverage and modernization of services to respond to the competition posed by the dominant private players — Reliance Jio and Bharti Airtel, which together account for a lion's share of the market, ultracompetitive market on pricing and digital services innovation (Wikipedia – BSNL; TRAI data; tradebrains.in, 2024). These modernization efforts, on the other hand, BSNL has very little to show in the form of raw numbers and outdated infrastructure market share wireless segment compared to private operators, and regulatory market pressures on revenue, justifying the need to remain relevant to the customer; modern telecom market in its reliance on telecommunication services and the digital divide, to remain inclusive, signal access especially in the rural and socio-economically diverse states like Karnataka which is also the reason for the socio-economically diverse state of Karnataka and the accurate understanding of the competitive telecommunication market with diverse consumer preferences and the competitive telecommunication market, which also the socio-economically diverse state of Karnataka, and the reliance on telecommunication services and the digital divide, to remain inclusive, signal access especially in the rural and socio-economically diverse states like Karnataka which is also the reason for the socio-economically diverse state of Karnataka. Socio-cultural factors also impact demand and so do the unique nature of the India telecom industry, amongst other factors such as; the sensitivity of consumers towards price; their expectations towards service; the performance of the network; their perception of the brand; their level of aspirations in the digital space. A recent study has shown that changes in the tariffs of the dominant players in the market have resulted in turn in the behavior of consumers as they adjust their preferences based on the flexibility of service offered in relation to the price, quality and coverage (tradebrains.in, 2024; TRAI, 2025). It is also reasonable to limit the study to the Karnataka region in view of the digital divide that is present and the heterogeneous nature of the consumers as well as the unique position that the state has as an information technology center in the country, combined with the underdeveloped rural districts of the state. Therefore, it offers an opportunity to understand the varied ways in which different consumer groups of BSNL, the state-owned telecom service provider, assess the service offerings of the private service providers. It also gives the researcher the opportunity to juxtapose the varied levels of consumer behavior with the prevailing industry conditions in a dominant telecom service provider and the rural setting of the distinct consume. This will provide the country with the necessary theoretical and policy perspectives towards the provision of public telecom services to enhance digital inclusion, competitive pluralism, and sustainable connectivity in emerging markets.

### **Problem Statement related to the study**

For many decades BSNL has been a cornerstone of India's telecommunications infrastructure, with a deeply dug institutional and network presence that spans within urban and rural areas. Though one of Bharat Sanchar Nigam Limited (BSNL) earliest and most extensive telecommunications networks, with deep infrastructure reach and that has historically played an enabling role in knitting together city - country regions, BSNL's market share has been declining for years. Since 1999, when cellphone services first began in India: data from TRAI show us that BSNL has a mobile subscriber market share creeping about 7-8 percent--whereas private telecom giants such as Reliance Jio are on their way through the 40 Congratulations for getting proceeds from spectrum reallocation and revival packages. After all, it is not because BSNL has no a sound foundation BSNL was severely affected by this kind of competition erosion both BSNL's physical resources. A recent analysis in RCR Wireless News revealed that market policies and government objectives to increase BSNL's share in the telecom sector are having little effect. The most telling bit of all is how these

changes are not merely short-term effects but a comprehensive challenge for public companies to retain their customers. It's refreshing to note that a good part of the advice BSNL get from commercial advisors on strategies for gaining more subscribers is designed by Western telecom theory and equipment. Yet there is a strong commitment among people not only to extend the market share of this tradition bound company toward new scales but also promote technology development and investment. Whenever I am in an Indian village or train station, I find that BSNL is there. At any rate, I can easily see its brand logo on the ground. Further, we find that those with long memories never abandon the company -- they just have to get different careers now. Not only are there no new employees, but old BSNL staffers have been forced out on mass retirements. At the local level in Karnataka, Palaniappan Gurusamy's research on the BSNL brand highlights how non-price determinants such as trust and perceived service value are important factors in consumer choice literature. In other words, existing research focuses on general consumer sentiment and compares quality of service across providers but fails to examine the manner in which non-price factors like brand trust due to public ownership, rural coverage, digital inclusion aspirations and perception of service value are interrelated with dynamic marketplace conditions influencing decisions towards BSNL services. This leaves an important gap in the academic understanding of why consumers may continue with or abandon BSNL, which in turn limits strategic insight for policy makers and BSNL managers who want to increase subscribers other than simply through tariff adjustments or better infrastructure. Therefore, there is an urgent need to conceptualize and study the many dimensions playing into consumers' choices in localized markets, such as Karnataka, on the one hand, and use empirical methods caseloads on the other hand. If we can realize this in a well - grounded, academically important and economically meaningful way about the reason the commercial trial of BSNL still exists as we make the transition from this fading, public stronghold to a thriving private sector environment of telecommunications in India.

### Objectives of the Study

1. To identify key factors influencing consumer decision-making toward BSNL services
2. To examine the role of trust, affordability, and service coverage in consumer choice
3. To conceptualize consumer behavior toward public sector telecom services
4. To propose a conceptual framework for future empirical research

### Scope of the Study

As the geographical universe for this conceptual study scope focuses on BSNL offering four principal types of services—mobile (including prepaid and postpaid GSM/4G services), broadband services (Bharat Fiber and traditional wired internet), and landline telephony which while a legacy but still relevant component of BSNL's service mix in the region; collectively, these three core portfolio lines represent the breadth of BSNL's consumer-facing telecommunications ecosystem in a state where digital connectivity demands widely vary across urban tech hubs like Bengaluru in contrast to more remote districts exhibiting diverse digital adoption patterns; and the Indian telecom sector at large has witnessed rapidly evolving dynamics juxtaposed against high competition, altered consumer behavioural patterns featuring sharply rising mobile internet penetration and broadband demand within the nation (MarkWide Research predicts sustained market growth through 2026 and beyond driven by smartphone adoption and data consumption), yet this study intentionally limits itself to secondary source conceptualization rather than primary fieldwork, synthesizing existing scholarly literature, industry reports, regulatory publications, and documented market data to construct a theoretical framework of the key determinants of consumer choice without quantitative data collection so as to enable a holistic, literature-driven understanding of how non-price influences like perceived service quality, network coverage, brand trust in a public sector operator, customer service experience, digital inclusion motivations and socio-economic factors weave with pricing considerations in impacting consumer decision-making toward BSNL's mobile, broadband and landline services in the local context of Karnataka; and besides outlining the interconnectedness of consumer adoption behaviour from BSNL's service offerings, it will conceptually map out relevant theoretical constructs and contextual factors on existing research on telecom consumer behaviour including but not limited to service quality, switching behaviour, and preference determinants in the Indian telecom industry, to benchmark BSNL's position within the competitive landscape of mobile and broadband offerings, while acknowledging regional nuances in order to demarcate the conceptual boundaries to encompass Karnataka's demographic and connectivity profiles as well as BSNL's service portfolio, but to exclude primary surveys, field experiments or predictive modelling, well outside the scope of this paper since it aims

at secondary research synthesis rather than generating original sample data; grounded instead in documented industry trends and scholarly discussions on consumer behaviour in the telecom realm rather than new empirical data collection methods, and such scoped approach thus affords clear parameters within which to theoretically explore consumer decision-making processes toward BSNL within Karnataka mobile, broadband, and landline service segments.

## Review of Literature

Consumer decision-making literature for service sectors, while grounded in the Theory of Planned Behavior wherein attitudes, subjective norms, and perceived behavioral control are linked to intention and behavior (Ajzen, 1991), has emphasized the heterogeneous contribution of cognitive, affective and contextual cues toward evaluating services (e.g. the Technology Acceptance Model in relation to perceived usefulness and perceived ease of use) (Davis, 1989), while in service contexts characterized by experiential offerings and pre-market intangibility, quality and satisfaction frameworks dominate: SERVQUAL posits that expectations and performance gaps operate at the level of several dimensions specifically, reliability, responsiveness, assurance, empathy, and tangibles—to drive perceived service quality, and in turn, satisfaction and loyalty (Parasuraman, Zeithaml, Berry, 1988), and indeed within service settings such as telecom services characterized by repeat usage, switching costs, and network externality effects, post-purchase evaluation and word-of-mouth play an important role; through the telecom lens, research repeatedly identifies “selection factors” such as pricing strategy, network quality, and customer service as foremost drivers of provider choice, yet operates more as a bundle pricing not converting to preference until the network clears a minimum reliability threshold and service recovery mechanisms possess credibility an insight confirmed by multi-criteria models of consumer decision rules that rank and weight determinants mobile network operator choice (Prioritising the preference of factors affecting the mobile network operator selection, 2021), and further demonstrating that consumers employ multiple product attributes (value added services and customer care included) rather than relying solely on tariffs to form preferences. This is partly also reflected in the prices consumers have been exposed to and the perception of what is acceptable quality and speed, in an environment where private operators have made investments on an unprecedented scale while bundling up a radical shift in consumer expectations in a short span of time (Telecom Regulatory Authority of India [TRAI], 2025), and so up until the past five years, and as TRAI (2023) subscription datasets routinely depict, India’s wireless market is highly concentrated with the leading private operators enjoying three-quarter marks in market full shares even in a downward spiral of rising prices (Jio and Airtel leading the pack, BSNL remaining firm but lower, examples are Oct-2025 snapshot). Preceding parallel research in telecom service quality empirically documents that network availability / coverage, call / adata performance consistency, complaint handling, and responsiveness lead to satisfaction and continuance intentions (Nadgouda et al., 2019) and comparative service-quality studies in Indian cities have reported measurable relationships for varying service-quality dimensions with customer satisfaction across operators including BSNL (Rao et al., 2016) and consumer perception of reliability, service encounters and reactive and proactive perceived organizational responsiveness through top management correlates with BSNLs retention and acquisition challenges (Rao et al., 2016; Vengatesh, 2023). Beyond generic selection-based factors, the “public sector vs private sector” literature indicates that consumers might apply divergent evaluation logics to government-owned providers because trust, credibility and perceptions of public value can function as separate signals—government ownership may boost perceived legitimacy and social mission for certain segments and stimulate expectations of slower service innovation or weaker customer experience for others—endowing trust with an even more nuanced role in public telecom contexts (Competition Commission of India[CCI], 2022). For instance, recent empirical work that directly compares the service orientation of public v/s private telecom firms further suggests that being customer centric, excelling in operational responsiveness, and having high service quality are strategic differentiators in squarely competitive markets, which also implies that consumer choice is driven not just by what is on the table (i.e., the tariff/ plan offered) but also by how it is placed (i.e., the delivery of the offer where support processes, crisp communication, ease of troubleshooting and similar delivery cues often become the yardstick for a public provider to be measured against private ones (Singh, 2024). In BSNL-specific studies, existing research often addresses consumer perception, satisfaction, and performance challenges in localized contexts, and reiterates that BSNL provides value to consumers in terms of price and coverage (especially in under-serviced regions), but faces customer pain points related to service responsiveness, time-to-resolution, and experience consistency trends we observe in case-based consumer perception studies regarding BSNL mobile services (Gurusamy, 2018), and in district level studies of customer satisfaction that underscore the importance of service

delivery experiences and dealer/service touchpoints in influencing satisfaction and recommendation (A Study on Customer Satisfaction of BSNL: A Case Study of Krishna District, 2021). This broad streak of literature when taken together lends empirical credence to an Karnataka focused conceptual framing, which reveals that the relationship between consumer decision making towards BSNL works most compatibly as an interplay of perceived value (price to performance), perceived quality (coverage, reliability, speed), service relationship signals (customer care responsiveness and service recovery) and institutional trust (government ownership and credibility), whose effects are however moderated by contextual effects, such as urban–rural usage conditions and digital inclusion needs (as depicted by the mean demographic of BSNL users in Karnataka), which therefore legitimizes a synthesized conceptual framework that combines consumer behavior theory (intentions and adoption), service quality theory (expectations versus perceptions) and telecom selection evidence (multi-attribute trade-offs) to eloquently explain why certain Karnataka consumers may continue haunting BSNL notwithstanding the gains of private-sector players and why others may switch even when BSNL resorts to lower tariffs.

### **Research Gap related to the study**

Despite considerable academic and industry-level research on the Indian telecom sector due to its large scale, rapid technological evolution and high competition, a careful assessment of the existing literature points towards a distinct and under-explored research gap in relation to consumer choice about public sector telecoms such as Bharat Sanchar Nigam Limited (BSNL), particularly at the regional level, with most dominant conceptual and empirical frameworks in telecom consumer behaviour research having evolved around the private-sector operators and competitive market logics that centre price wars, volumes of data consumed, switching costs and technological superiority as key behavioural determinants but which do not theoretically articulate public sector telecoms as socially-embedded service institutions with objectives beyond profit maximization (Ajzen, 1991; Parasuraman et al., 1988); in particular, that many of the attributes affecting consumer choice might go beyond the more conventional service attributes typically considered in private sector contexts towards broader concepts of institutional trust, perceived social responsibility, government ownership and universal service obligations, concepts that are largely absent or weakly integrated in mainstream telecom consumer behaviour models which are predominantly embedded in market-driven private enterprise contexts (CCI, 2022; Singh, 2024); furthermore, notwithstanding that Karnataka is one of the most strategically significant yet large-scale economically-diverse states in India, comprising of the characteristic dual digital reality of advanced urban technology hubs such as Bengaluru as well as vast rural and semi-urban hinterlands still reliant on public telecom infrastructure, regionally-based conceptual or empirical studies exclusively focusing on Karnataka are rare, with most telecom consumer behaviour studies adopting either a pan-India spatial scope or confined to isolated district level case studies in other states, limiting the contextual understanding about how regional socio-economic diversity, digital inclusion requirements and infrastructure dependence shape consumer choice about BSNL in Karnataka (TRAI, 2024); in addition, while existing studies on telecom consumer gain, service quality or satisfaction analyse their effect as isolated determinants, they do not sufficiently integrate trust in government ownership, affordability as an equity mechanism; and the perceived social responsibility role of BSNL in extending connectivity to rural and underserved populations, despite recent policy discourse and regulatory data emphasizing BSNL's continued relevance in the national development of digital inclusion and sustainability of connectivity in non-commercially-attractive markets (Department of Telecommunications, 2023), revealing a conceptual disjuncture between the policy perspectives on public telecom value and the academic models of consumer behaviour which nevertheless very rarely capture the way ethical or public trust and social mission aspects might interact with functional service characteristics in affecting consumer choice; thus, the lack of an integrated, regionally-grounded conceptual framework that combines trust, affordability, service quality and social responsibility in the context of a public sector telecom provider is a wide gap in current knowledge and necessitating the present study to theoretically synthesize these diverse dimensions and offer a conceptual framework to describe the influences on consumer choice and facilitate the development of a foundation for future empirical validation of the model in the context of consumer decision-making towards and use of BSNL services in Karnataka.

### **Conceptual Framework (Theoretical Background) related to the study**

Based both on established consumer-behavior and services-marketing theory, this Conceptual Framework explains Consumer Decision-Making / Adoption of BSNL Services in Karnataka (the dependent variable) as an outcome of a

multi-attribute evaluation process through which consumers develop intentions and ultimately adopt based on attitudinal beliefs, perceived control and normative influences (as elaborated in the Theory of Planned Behavior) together with post-consumption assessments of service performance (as delineated by service-quality and satisfaction perspectives) and is especially salient in contemporary Indian telecom, where market concentration and fierce competition, which both heighten consumer sensitivity to functional and symbolic provider cues, exists (as illustrated through TRAI subscription releases which, even as private operators are achieving dominance, still show that BSNL retains a significant wireless share, e.g., October 2025 reports show BSNL with <7.90% wireless market share alongside Reliance Jio with 41.36% and Bharti Airtel with 33.59%) such that a non-negligible segment is still choosing/remaining with BSNL and thereby warrants an explanatory model that operates beyond "price only" assumptions. The independent constructs in this framework work as follows: Pricing & Affordability shape perceived value by affecting the consumer's cost-benefit trade-off and affordability threshold (especially salient for students, low-income households, and price-sensitive prepaid users), and while it can function as an "entry driver" to trial, its power to convert into sustained adoption is conditional on other attributes matching minimum thresholds; Network Coverage denotes perceived availability and reliability across consumer geographies (home-work commute, rural hometowns, highways), and is especially meaningful for Karnataka's mixed geo-topology of dense urban demand (such as Bengaluru) and coverage-dependent districts, where the continuity of signal/reach might be valued over peak speeds among consumers; Service Quality captures experienced performance across reliability, responsiveness, assurance, empathy, and tangibles (the SERVQUAL logic), which in telecom terms translates to stable call connectivity, consistent data performance, clear billing/plan communication, frictionless onboarding, and effective complaint resolution, jointly driving satisfaction and reducing churn propensity in a competitive context; Brand Trust functions as an institutional and relational signal—whether consumers trust that BSNL will deliver fairly, uphold customer interests, and remain stable in the long-run—and is plausibly enhanced for some segments by the legitimizing quality of a public-sector operator but diminished for others if past experiences create expectations of lag in problem-resolution or technology; Government Backing is conceptualized as a dual-path influence comprising (a) perceived credibility and continuity due to state ownership and policy support, and (b) perceived capability gains due to visible modernization initiatives such as the government-supported indigenous 4G rollout (hundreds of thousands of 4G sites planned to be deployed nationally, tens of thousands reported) that can shift consumer beliefs around future network competitiveness, and thus strengthen intention to adopt (or remain with) BSNL. This is a facet of Rural Accessibility operationalizing the claim that BSNL is available where others are weaker, in remote and commercially unattractive areas, incorporating a public-service expectation and digital inclusion narrative, underpinned by regulatory coverage requirements and rollout targets aimed at extending 4G reach to remote villagers (including reports of reaching tens of thousands of remote villages under these public funding regimes); which can matter to Karnataka consumers with continuing ties to rural family, agricultural livelihoods, or mobility across districts where private-network experience may be uneven. Customer support captures the ease and effectiveness of obtaining assistance availability of local offices / centers, responsiveness of helplines, transparency of grievance handling, and service recovery quality—because the "moment of truth" in complaint handling can have disproportionate impact on perceived fairness and loyalty (as compared with habitual usage) in service industries; each independent construct has direct, positive effect on consumer adoption intention and/or continuance (with affordability and coverage typically acting as primary screening criteria, and service quality (support and trust) as retention / advocacy drivers), while government backing and rural accessibility act as context-specific reinforcement mechanisms that can expand the sphere of trust and perceived value beyond mere commercial attributes to a broader set of regionally relevant values, and ultimately these pathways collectively explain why BSNL adoption remains entrenched among select segments in Karnataka despite private-operator dominance yielding a testable, literature-coherent conceptual model that integrates the postulated elements of Consumer Decision-Making / Adoption gamut where perceived value (price-to-performance)→perceived risk reduction (coverage and reliability)→relationship assurance (support and trust)→institutional legitimacy (government backing and social mission) were interpreted through the lens of the dynamic competitive realities evidenced by India's telecom subscription trends and BSNL's continuing network modernization.



#### Above image showing Conceptual Framework (Theoretical Background) related to the study Research Methodology

This study employs a conceptual research design since its main objective is a theory building-based understanding of consumer decision making toward BSNL telecom services in Karnataka instead of testing relationships through field data, and as such the methodology is built around a synthesis of literature from consumer behavior, service marketing, and telecom studies domains where the nature of the study is entirely conceptual focusing on theory building, construct identification, and framework formulation to explain the multiple factors driving consumer adoptive behavior of a public sector telecom provider in a competitive market environment, and the study relies purely on secondary data sources that include databases with peer-reviewed academic journals, with data being sourced from recognized academic databases such as Google Scholar, Scopus indexed, and UGC-CARE listed journals, authentic government publications and annual reports from Department of Telecommunications (DoT), Telecom Regulatory Authority of India (TRAI) performance indicator reports and subscription data, policy documents concerning telecom sector reforms and BSNL revival plans, and credible telecom industry analyses from research organizations and industry bodies since these sources provide valid, upto-date, and relevant context-specific insights on market structure, consumer behavior trends, and the changing role of public sector telecom enterprises in India (TRAI, 2024; Department of Telecommunications, 2023); and methodologically, the study follows a structured literature synthesis and theoretical integration approach, whereby extant studies are critically reviewed, compared, and conceptually integrated covering they type of models developed for consumer decision-making (Theory of Planned Behavior, service quality frameworks), telecom service selection factors (price, network coverage, service quality, and customer care) and public versus private sector service perceptions (trust, credibility and government ownership), and wherein recurring patterns, gaps, and relationships are identified that aid to the streamlined formulation of a coherent conceptual framework contextual to Karnataka, to go beyond fragmented findings by linking diverse theoretical perspectives into a unified explanatory model that captures both market-driven

and institution-driven influences on consumer choice, and the exclusive dependence on secondary data provides an opportunity to incorporate real-time empirical evidence and regulatory statistics on subscriber trends and market share distributions as reported by TRAI over the years, as illustrative contextual inputs that reinforce the relevance and applicability of the proposed framework without engaging in statistical estimation ensuring methodological rigor while retaining conceptual clarity [52]; overall the methodology is deemed appropriate in pursuit of the study's aim of advancing theoretical understanding, providing policy-relevant insights and serving as a robust foundation for future empirical research which may operationalize and test the proposed relationships using primary data across different regions or service segments.

### Propositions related to the study

Anchored on the established literature on consumer behavior, service value, and institutional trust in the telecom service sector, the present study advances a series of interrelated propositions that articulate the process of consumer decision-making and adoption of BSNL telecom services in Karnataka where P1 asserts that affordable pricing has a positive effect on consumer decision-making toward BSNL, and this proposition is particularly relevant in the Indian context where large-scale subscriber shifts are often driven by price affordability which, despite powerful forces of consumer inertia, competition and service expectations, remains a crucial determinant of choice even in high usage-frequency and low-switching-cost markets like Karnataka with a higher percentage of prepaid consumers and low-income segments as part of the consumer base, a finding that is consistent with the historical evidence in the high penetration and low-cost Indian telecom landscape where perceptions about relative cost positioning have endeavored to translate into value perceptions to drive significant consumer choice behaviour (Zeithaml, 1988; TRAI, 2024); P2 proposes that brand trust exerts a significant impact on consumer preference for BSNL and this is based on the assumptions of the trust-based relationship marketing and decision-making models which assume that in the inherent risk of telecom services, trust reduces adverse perceptions regarding potential risk and uncertainty with service consumption, especially for credence services where performance can never be fully evaluated prior to the consumption experience, and in the specific case of BSNL, given both the brand's long operational and category ecosystem based history, its ownership structure as a government entity, and its perceived stability and reduced exploitative service offering complexion are endowing features that prior studies have found to determine a more positive preference and loyalty toward public sector service organizations even at the potential cost of some lower performing private counterpart offerings on certain technology parameters (Morgan & Hunt, 1994; Gurusamy, 2018); P3 states that wide network coverage has a positive impact on consumer adoption of BSNL services, which is aligned with the literature on telecom selection where coverage and signal availability are identified as the basic "hygiene factors" in any consumer adoption decision, that is especially relevant in geographically diverse states such as Karnataka where the constant physical proximity movement of the consumer between urban centre externalities and rural district infrastructure differentials makes the geographic scope of service a key driver for consumer economic decisions, and also the current extensive legacy infrastructure and the coverage in outlying infrastructure and commercially unattractive areas presents a functional complement to the designs of many private operators that compete primarily based on superior speeds or promotional offers when the continuity of the essential service of connectivity is of concern (Vengatesh, 2023; TRAI, 2024); and P4 proposes that the government ownership makes the consumers positively perceive BSNL for being reliable, which is reflective of the institutional trust theory in relation to public sector brands where state ownership is understood as a credibility signal and indicates the higher possibilities of long-term service continuity, regulatory accountability and social responsibility particularly to more risk-averse consumers who believe that the service quality of the government-owned enterprises will be driven by their responsibility towards national infrastructure security and inclusive service goals, and is significantly supported by recent policy initiatives and revival package announcements that are expected to upgrade the potential technological capabilities of BSNL and its rural coverage ability, thereby reshaping consumer beliefs about sustainability and dependability of BSNL over the ensuing period (Ajzen, 1991; Department of Telecommunications, 2023). Collectively, these propositions position consumption choice towards BSNL not as a contingent upon the strength of a single salient dimension but as the joint effect of economic value (better tariff affordability), relational assurance (brand trust), functional performance (network coverage) and institutional legitimacy (state ownership), thus providing a theoretical explanation of the retention and attraction of certain consumer segments of BSNL in Karnataka in-spite of private

telecom operators having a decisive market share and also providing a systematic basis for future empirical testing of these relationships in context specific to the regions and the service segments.

### Theoretical Implications

Conceptualizing consumer decision-making towards Bharat Sanchar Nigam Limited (BSNL) telecom services in Karnataka in 2025, in the context of a competitive and rapidly evolving telecom landscape in India where total subscriptions already exceeded 1.18 billion wireless subscriptions (as per Telecom Regulatory Authority of India (TRAI) subscription trends report 2025) and while BSNL, also if considering MTNL together, continues to capture a substantially smaller 7.9 percent market share of wireless market compared to private sector champions like Reliance Jio (40 percent) and Bharti Airtel (33.6 percent), BSNL does showcases renewed growth and some traction in rural domain, as verified by the incremental net additions raising practically causing catch up on private operators, i.e., BSNL adding 524 000 subscribers in September 2025 while Jio and Airtel expanding their subscriber base as well—consumer choice is by no means restrictive to traditional competition elements (like higher prices or technology advancement) but rather is contingent on a complex interaction of multi-pronged variables where values and pricing affects first access and value judgments especially among price conscious segments, network coverage emerges as indispensable hygiene element and remains relevant in socio-economic assorted and faraway areas of the Karnataka's rural areas where service continuity outweighs max speed advantage, service performance and customer care efficiency modulate satisfaction and retention by hampering ranking of functional experience as compared to private operators, while institutional trust and perceived value of public ownership of BSNL along with its mandated objectives for universal service delivery governed by law serve as essential psychometric and normative cues reflecting respective parameter risk perception and long-range loyalty assessment propagation in a public sector standing and entity schema that traditional consumer decision making frameworks (Theory of Planned Behaviour, SERVQUAL etc.) are unlikely to fully capture; and in addition are indirectly bolstered by government support and vision of digital inclusion of BSNL services where perception of authenticity and strategic future prospect enrich BI constructs in cognitive schema of customers whose adoption and continuance intent within the public sector operational context of telecom service providers not only extends beyond the instrumental perspective of functional service attributes but is owing symbolic and institutional dimensions as well that jointly cater to the decision making process for an emerging segment face that conventional dynamics of in-market telecom CL-based decision making models (facilitate mainly via private sector framework mainly) are not likely to alter; community, sociocultural context, public trust and claims for transparent access aspirations lead functional utility aspect with symbolic dimensions and institutional foundation to shape a nuanced consumer decision making framework in an evolving market ecosystem like Karnataka in 2025 and beyond.

### Managerial and Policy Implications

While the conceptual study findings imply that in the highly heterogeneous and price-sensitive telecom market of Karnataka where private operators have a dominant share of subscribers, BSNL also remains a critical operator especially in rural and semi-urban geographies (as evidenced in ongoing TRAI performance indicators, 2023), for managers and policymakers to enable BSNL to strategically survive and stay competitive, it calls for a shift away from narrowly defined tariff-centric strategies toward an integrated and consumer-centric service management approach, which not only leverages BSNL public sector strengths but also addresses its operational weaknesses: from a managerial standpoint this implies that BSNL leadership should focus on distinct market segments—acknowledging the cost sensitivity on one hand but aligning affordable pricing with demonstrable improvements in perceived service reliability, customer support responsiveness and network availability especially in Karnataka's rural and remote districts where BSNL acts as the only connectivity provider and where continuity of service, institutional trust and local presence matter more than peak data speeds for consumer decision making (Gurusamy, 2018; TRAI, 2024) so as to require investments in last mile infrastructure, faster fault resolution mechanisms and decentralized service centers for better experiential service quality which can rebuild trust among users who may otherwise attribute slow or less responsive public sector telecom services against private alternatives (Gurusamy, 2018; TRAI, 2024); since signaling long-term capability and state support has been shown to positively influence trust-based adoption intentions in such consumer segments (Department of Telecommunications[DoT], 2023), managers should actively communicate BSNL's ongoing

modernization initiatives ranging from government-backed 4G expansion using indigenous technology and tower densification programs to reshape consumer perceptions regarding technological stagnation and future readiness; from a policy standpoint, the study further underscores that telecom regulators and government authorities should recalibrate success metrics for public sector telecom enterprises such as BSNL away from pure market share comparisons with private operators toward broader public value indicators including (but not limited to) sustainability of rural coverage over the next decade, affordability outcomes and digital inclusion impact, especially for a telecom ecosystem that needs to be fundamentally supportive of essential services like digital governance, education, health and financial inclusion by 2025 (IBEF,2025) thus doubling-down on not just the market competitor but macroeconomic leverage that a public operator holds, justifying continued fiscal and regulatory support for BSNL; policy interventions directed toward this end should also imbibe accountability and service quality benchmarks for public operators where any revival funding and spectrum allocations are linked to measurable improvements in customer service performance, complaint resolution timelines and network uptime on underserved regions which will in turn ensure that the inherent public trust associated with government ownership of the telecom service is not undermined and that experiential gaps do not erode trust but complement it and finally for the state-level policymakers in Karnataka, BSNL institutional reach can be leveraged by further integrating BSNL's broadband and mobile services into the State led digital inclusion initiatives, rural e-governance platforms and programs for digital connectivity of remote educational and healthcare facilities, that can amplify the social return on telecom investments whilst also anchoring BSNL within the context of everyday consumer usage; collectively, these managerial and policy implications are critical if BSNL's relevance in Karnataka is to be sustained over the next decade through a coordinated strategy in which managerial service delivery Excellence and transparent communication is augmented with a policy framework that balances competition with equity, where the long-term viability of the BSNL as part of India's telecom landscape can be assured not just through having affordable services but through an enabling avenue that integrates trust, accessibility and loss of legitimacy for the BSNL as a provider of inclusive digital connectivity in an increasingly privatized and profit driven telecom landscape, where the populace remains part of the decision-making process regardless of the economic background.

### **Limitations of the Study**

In terms of theoretical contribution and contextual relevance, the research asserts that there are inherent limitations in the study which necessitate an accurate interpretation of its findings. Perhaps most significantly is this: the study is conceptual in nature, relying exclusively on secondary data sources. While enabling broad synthesis of established theories, regulatory reports, and industry analyses, this inherently restricts the ability to capture real-time consumer perceptions, behavioural nuances, and evolving experiential factors that are increasingly dynamic in India's telecom sector—particularly during 2024–2025 when rapid developments like tariff revisions by private operators, phased rollout of BSNL's indigenous 4G network and shifting patterns of mobile data consumption are actively re-shaping consumer expectations and usage behaviours (TRAI 2025; Deloitte 2024). Further, the exclusive dependence on published literature, government documents, and industry reports introduces the possibility of data lag and reporting bias as secondary sources often reflect aggregated or retrospective trends rather than granular, localized consumer experiences. Especially in rural and semi-urban contexts where informal usage patterns, network improvisations and socio-cultural influences on telecom adoption may not be fully captured by national-level statistics or policy documents (World Bank 2023). Nor is the absence of empirical validation a trivial matter. As the proposed conceptual framework and theoretical propositions though grounded in well-established consumer behaviour and service quality theories have not been statistically tested using primary data, surveys or econometric models, this limits the ability to infer causal relationships. Nor can the strength of individual determinants be assessed, or findings generalized across different consumer segments, income groups or usage categories—a constraint that is particularly salient in a highly competitive telecom market like India where consumer switching behaviour can be influenced by short-term promotional strategies, device bundling and peer effects that require empirical observation to validate theoretical assumptions (Hair et al 2022). Moreover, the study's regional focus on Karnataka—while analytically justified because the state is both a global technology hub and a region plagued with significant rural digital divides simultaneously places constraints on the external validity of the findings. The way people make decisions towards BSNL in Karnataka may differ substantially from other states in India. Some have more infrastructure, others not. Different languages are spoken and such things like that (NITI Aayog, 2024). Neither does the study explicitly reflect emerging structural factors such as the increasing convergence of telecom

services with digital platforms, OTT substitution effects, enterprise broadband demand or long-term impact of 5G diffusion on consumer expectations; according to recent industry outlooks, these are expected to significantly influence future consumer decision-making dynamics in India's telecom sector over the next decade (PwC 2024). So, while the concept model provides a strong edifice for understanding BSNL-related consumer behavior in Karnataka at present stage of market evolution, all these limitations highlight the need for future research to empirically test, regionally extend and longitudinally refine the proposed constructs, in order to enhance explanatory power, predictive accuracy and policy relevance in an increasingly complex and fast-changing digital connectivity landscape.

## Managerial and Policy Implications

The implications from this conceptual study suggest that in order for BSNL to be strategically relevant and stay progressing in what is becoming an increasingly heterogeneous and highly price-sensitive telecom landscape in Karnataka where private players still dominate consumer subscription base needs, BSNL still plays a critical role in rural and semi-urban geographies, if the performance indicators from recent TRAI reports (TRAI, 2024) are to be taken into account—BSNL managers and policy makers must move beyond the traditional narrow tariff definition to an integrated, service management approach that is consumer centric, one that is aligned with both BSNL sectoral strengths in the public government domains and also tackle the sectoral weaknesses in certain operative lines of the business; hence from a managerial perspective, the leadership at BSNL should focus on having value propositions that are segment driven by focusing on bringing together affordable prices at par with the traditional telecom offerings, built around the improvements brought in by the organizational service resilience in terms of the simplification of customer support, availability as well as ensure network presence, especially in Karnataka where BSNL still functions as a primary connectivity provider in rural and remote districts and where continuity of service, along with institutional trust and local township presence, tend to outweigh the peak data speeds as the crux of decision making while the consumers tend to retain an historic perception that the state-led ownership is less responsive and slow-to-act compared to the private players (Gurusamy, 2018; TRAI, 2024); managers should also focus on actively communicating the modernization initiatives undertaken by BSNL—from 4G expansion using indigenous technology to tower densification programs—to reshape consumer decisions as related to the perception of technology stagnation and future readiness, as evidence shows that signaling capabilities in the long term coupled with the acknowledgment of state support positively affect the adoption intentions particularly among risk-averse consumers in the rural setting (Department of Telecommunications [DoT], 2023); Furthermore, from a policy standpoint, this study underlines the need for telecom regulators and governmental authorities to recalibrate the success definition of the public sector telecom enterprises like BSNL as opposed to more pure market segments comparison with the private players however based on extended success indicators which transcend beyond market share and are defining the public value encoded around rural coverage sustainability, affordability, and digital inclusion impact especially when it comes to the telecom ecosystem of India in 2025 when the infrastructure underpin serves several essential services such as digital governance, health, education, formulations of education for socio economic inclusion on grounds of justice while justifying the control on continued fiscal and regulatory provisioning of the public enterprises such as BSNL are more relative to strategic national infrastructure asset (IBEF, 2025) than as just a commercial competitor; policy makers should also endeavor to strengthen the accountability and the quality benchmark of services along with the allocation of funding for the revival of public operators like BSNL by linking it to quantifiable improvements in customer service performance indicators, timelines of grievance redressal, and network uptime in underserved regions thus promoting the public trust associated with government ownership, if at all reinforced through the perceptible service outputs rather than with experiential gaps; In addition to the above, state level policy makers in Karnataka can also leverage the institution of BSNL, and have its broadband and mobile services deeply aligned with the state-level digital inclusion initiatives, rural e-governance platforms, as well as connectivity programs for remote educational and healthcare facilities thus amplifying the per collation returns of investment in the sector for the social cost and simultaneously anchoring BSNL around the context of everyday consumer usage; Collectively, these managerial and policy implications suggest that in order to sustain the relevance of BSNL in Karnataka, the sectoral concatenate needs to be simulatively cultivated through managerial actions which radiate the service delivery excellence at the operational front; while the expectations reinforced through the

policy framework which recognize the incumbent role-played by the public sector telecom services while balancing competition along the equity scale thus acquiring shape for the service quality equations the kind of equation where the consumer decision takes a positive lead not just by virtue of the affordability but also trust and accessibility of the perception legitimacy of BSNL as a long-term player of inclusive digital etching of connectivity across an increasingly privatized telecom delivery ecosystem.

### Directions for Future Research

Expanding on the theoretical insights of the present study, then, future research on consumer decision-making toward BSNL telecom services in Karnataka should proceed in several complementary directions, such that subsequent investigations could substantiate and refine the proposed framework by undertaking large-scale primary data collection through structured surveys, interviews, and mixed-method designs to statistically test relative influence and causal pathways among affordability, service quality, network coverage, brand trust, government ownership, and rural accessibility—particularly utilizing advanced analytical techniques such as structural equation modelling (SEM) or multigroup analysis to explore heterogeneity across income levels, age cohorts, rural–urban segments, and usage profiles given the changing telecom consumption dynamics in India where mobile data usage per subscriber continues to grow annually and consumer expectations becoming increasingly experience oriented (TRAI, 2025; Ericsson, 2024); secondly, future studies could adopt a regional comparative perspective by replicating the conceptual model across multiple Indian states with differing socio-economic and infrastructural contexts—such as digitally advanced metropolitan regions vis-a-vis backward or hilly terrains, or North-Eastern states where BSNL has a relatively stronger presence—to enhance external validity and generate insights across jurisdictions on how contextual factors moderate public sector telecom adoption and thus contributing to a more generalized theory on public telecom consumer behavior in developing economies (NITI Aayog, 2024); longitudinal studies tracking consumer perceptions and switching intentions over a time period would also be particularly useful in capturing the dynamic role of BSNL's ongoing network modernization efforts, including its phased indigenous 4G rollout and planned 5G transition, on trust, perceived service competence, and retention behavior—especially as recent policy and industry outlooks suggest that technological equivalence to private operators may considerably alter consumer beliefs regarding public sector service viability in the medium term (Department of Telecommunications, 2024; PwC, 2024); future scholarship could also effectively integrate digital ecosystem variables, such as OTT service substitution, smartphone affordability, digital literacy, and platform-based service bundling between telecom connectivity and digital services, given the intensification of converging lines across digital economy and society, which albeit expected to intensify as India's digital economy expands and telecom services potentially become enmeshed within governance, fintech, health-tech, and education platforms (World Economic Forum, 2024); further qualitative research focusing on institutional trust, perceived social responsibility and ethical evaluations of public versus private telecom providers could offer deeper insights into the symbolic and normative aspects of consumer choice that are less readily captured through quantitative tools—especially among rural and older user segments for whom BSNL's public ownership may confer security and continuity instead of innovation; finally, the framework could be extended internationally by exploring other emerging economies to ascertain if the interplay of affordability, trust, and social mission observed within the Indian context holds across comparably similar regulatory and developmental environments, thereby positioning BSNL-based study as a basis for a wider, globally relevant theory of consumer decision-making in public sector digital infrastructure services.

### Conclusion

Thus, this theoretical investigation into Consumer Decision-Making towards BSNL Telecom Services in Karnataka melds contemporary consumer behavior theory, service quality literature, and the public sector service perspective to illustrate that understanding consumer decision-making with respect to BSNL in Karnataka is best perceived as a multidimensional and context-specific process in which affordability, network coverage, service quality, customer service, institutional trust and perceived public value transcend merely isolated roles but experiences a dynamic interplay instead; additionally demonstrating that while yet continues to outplay BSNL in subscriber share as well as revenue upsurging to an overall of 90% in user stake- based on the latest TRAI indicators 2025, BSNL still possesses significant value in certain consumer segments; especially in, rural, semi-urban and economically weak areas, where service

derivatives like continuity, price stability and institutional credence supersede user expectations such as required data speeds or packaged digital services (TRAI, 2025)—further reflecting the compelling relevance of public sector telecom services in India by portraying BSNL's unique nature as an operator tied to the mandate of providing socio-technical infrastructures such as universal service obligations, rural connectivity and digital inclusion to maximize national benefits, particularly at this point where digital economy in India is growing and telecom connectivity is becoming infrastructural and thereby indispensable for citizen services such as e-governance, education through internet, healthcare delivery and financial inclusion; especially in a state such as Karnataka hosting extremely advanced urban digital ecosystems whilst being delinquent through unbridged rural areas (Ministry of Communications, 2024); so that bull's eye action is needed to ensure that BSNL's visible values lie beyond the confines of commercial speculation and fleecing into creating public value that expresses equal broadband access (NITI Aayog, 2024); and finally academic contributions are twofold, the study augments existing theories by extending conventional consumer decision-making and service quality frameworks—largely developed in private-sector, profit-maximization contexts—into the underexplored realm of public sector telecom services, conceptually integrating elements of institutional trust, government ownership, and social responsibility with traditional functional determinants such as price and service reliability, thereby providing more holistic explanatory frameworks capable to capture the nuanced motivations that promote consumer adoption and retention in public service settings in an emerging economy context, thus filling a much-needed void in telecom research and public enterprise where public providers are often solely informed through private market performance (Osborne, 2023), while at the same time its creating normative and policy relevant research intersect aiding practitioners deliver theoretically grounded managerial contributions to BSNL's strategic execution through clear consumer-oriented service delivery, strategic communication of modernization efforts, reinforced rural service models; and assisting policy makers with a theoretical framework to evaluate public sector telecom entities not only in part of private market driven performance measurement but based on digital inclusion, affordable telecommunication, and sustainable infrastructure in planet context—a much needed research and effort as India continues heavy investments in digital infrastructure and telecom capabilities as part of its development plans (NITI Aayog, 2024); hence, by positioning consumer decision-making within the intersecting realities of competitive telecom markets, public ownership, and socio-demographic diversity, this research validates that BSNL's continued footings in Karnataka (and hence in India) lies on its capacity to balance economic value with institutional trust and social mission; and the conceptual framework advanced here—a clay-model for future empirical research and policy-relevant scholarship ensuring an equity-based, robust, inclusive, and sustainable digital connectivity through a substantive public sector telecom by nature in these rapid evolving emerging-market settings.

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