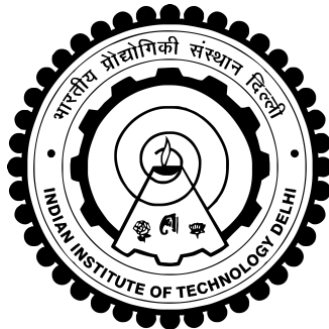


**CUSTOMER CENTRIC MARKETING INNOVATION  
IN  
TELECOM INDUSTRY**

**DIVYA SETHI**



**BHARTI SCHOOL OF TELECOMMUNICATION TECHNOLOGY & MANAGEMENT  
INDIAN INSTITUTE OF TECHNOLOGY DELHI  
OCTOBER 2022**

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**Customer Centric Marketing Innovation  
in  
Telecom Industry**

**By**

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**Submitted  
in Fulfilment of the Requirements of the Degree of  
Doctor of Philosophy  
to the**



**Bharti School of Telecommunication Technology & Management  
Indian Institute of Technology Delhi  
October 2022**

## Certificate

This is to certify that the thesis titled “*Customer Centric Marketing Innovation in Telecom Industry*”, which is being submitted by **Divya Sethi** to the Bharti School of Management Studies, Indian Institute of Technology Delhi, for the award of the degree of **Doctor of Philosophy** (Ph.D.) is a record of Bonafide research work carried out by him. He has worked under my supervision in conformity with the rules and regulations of the Indian Institute of Technology Delhi. The research reports and results presented in the thesis have not been submitted in part or full for the award of any degree or diploma in any other University or Institute.

**(Prof. Mahim Sagar)**

Research Supervisor,

Bharti School of Telecommunication, Technology & Management,

Indian Institute of Technology, Delhi.

**Dated:** \_\_\_\_\_



## Acknowledgements

*“WE ARE KEPT FROM OUR GOAL NOT BY OBSTACLES,  
BUT BY A CLEAR PATH TO A LESSER GOAL”*

Robert Brault (BHAGAVAD GITA: 2.57, 2.62)

Above quote is the source of motivation and inspiration for me during the course of my Ph.D. Journey at Bharti School of Telecommunication Technology & Management, Indian Institute of Technology, Delhi (IITD). This journey became possible only because of the contribution of several people. I would like to extend my gratitude and thanks to each one of them for their regular guidance, motivation, and support.

My first gratitude, thanks, and obligation are reserved for Professor Mahim Sagar, my thesis supervisor, who has been a source of motivation, knowledge, and wisdom throughout this Journey. His passion for Marketing, Telecom Industry and, Research has been the catalyst that kept me going. I truly feel fortunate and blessed to follow this research under his guidance and supervision. Thank You Sir, I am truly obliged to each and every member of the Student Research Committee (SRC), Prof. Ravi Shankar, Prof. Harish Choudhary, and Prof. Brejesh Lall for their valuable feedback and support during this journey. I am also thankful to the Bharti School of Telecommunication Technology & Management for providing me this opportunity along with each and every staff member of the Institution.

I would also like to extend my earnest thanks to the members of the marketing Lab (Delma Momi, Charu Jasti), my fellow Ph.D. scholars Murali Krishna Medudula, Deep Shree, Rojalin Pradhan, Shiksha Kushwaha, Aditya Nakula, from Department of Management Science (DMS) for their continuous, support, guidance and motivation and making this Journey wonderful.

I would also like to extend special thanks to my professional colleagues- Mr. Subhranshu, Mr. Ravi Gandhi, and my reporting managers at work Mr. Najib Khan and Mr. Ajay Chitkara for extending their support and guidance during this journey.

Lastly, I would like to sincerely thank my wife Mrs. Neeru Sethi, and my sons Shourya Sethi and Manan Sethi for their support and motivation during this research. It was not possible without your support Neeru and Boys. A special thanks to Lakshya Monga and Mr. Satish Belani for their contributions. I would also like to acknowledge the support I got from my brothers-in-law Dr. Sanjeev Dhawan, Mr. Rajeev Dhawan, and my father-in-law Sh. M.L.Dhawan, Mr. Satya Rishi, and my dear sisters- Anu and Surbhi during this research.

I would like to dedicate this research work to my parents, my father Sh. Subhash Chander Sethi and my mother Smt. Shashi Sethi has been a beacon in my life. They had sown the seeds of hunger for higher and constant education for becoming better human beings.

Above All, I would like to thank my “*Lord Shri Krishna*” for Blessing me with strength, good health, and the ability to conclude this work. Hari Bol!

Place: New Delhi

**Divya Sethi**

Dated: \_\_\_\_\_

## Abstract

This study is set up in the continuous services environment wherein products or services are commoditized with hardly any differentiation such as banking, insurance, and telecom sectors. Any change in price or an occasional shortfall in core value delivery drifts customers away, therefore, making long-term customer loyalty a distant dream for any firm.

The telecom industry of India has been chosen among other industries after a careful analysis as it represents the most complicated version of the continuous services industry.

There is constant technology innovation (3G,4G,5G) inviting huge investments in infrastructure regularly. Customer needs are ever-evolving because of higher levels of mobile app adoption. Business models of telecom companies are constantly evolving leading to hyper-competition within and across the telecom industry. The Indian telecom industry has seen unprecedented mergers & acquisitions and exits since the year 2016 because of falling average revenue per user (ARPU), poor return on investment (ROI), and profitability. At the same time, the Indian telecom industry stares at tremendous growth opportunities in the form of increased demand for high-speed broadband, unpenetrated rural geographies, increasing per capita income, a higher population of youth, and a very high adoption of smartphones and apps. It raises a fundamental question: How to grow profitably in such a complex environment?

While there are an 'N' number of interesting innovation studies suggesting various innovation theories and models for telecom businesses globally but surprisingly, they fall short of suggesting a comprehensive marketing innovation model. This research is an attempt to fill this gap. This study aims to understand the phenomenon of customer centric marketing innovation among Indian telecom companies and develop a framework for the same, which might serve as a reference for other industries in a similar setup.

This study has been conducted in six phases. The first phase focuses on a literature review focused on the overview of the telecom industry, past studies on customer centricity and marketing innovation, and concludes with a structured literature review of innovation studies in the telecom industry.

Phase 2 of the study was conducted to identify the research gaps, formulation of research objectives, and research questions. Phase 3 of the study was conducted to address these gaps. It involved identifying the ground realities regarding the application of customer centric marketing innovation in the telecom industry, the key factors affecting it, and other relevant themes using grounded theory methodology. Customer loyalty was identified as a core theme along with sub-themes and key factors representing those sub-themes. It concludes with the formulation of a conceptual framework having customer integration, external integration, internal integration and functional value innovation, emotional value innovation, social value innovation, and economic value innovation as key constructs and 65 measures (observed variables) for achieving customer loyalty and business profitability. It concludes with a customer centric value innovation equation and proposed six propositions.

Phase 4 of the study further builds on the findings from phase 3 and validates the conceptual framework quantitatively using the structural equation modeling (SEM) method. It tests previously identified six propositions and highlights that functional value innovation leads to loyalty significantly. The model recommends significant covariances between external integration and functional value innovation. Additionally, significant covariances were also observed between functional and emotional value innovation, and between external integration and emotional value innovation respectively. It importantly highlighted the insignificance of internal integration, social value innovation, and economic value innovation with poor reliability and validity ratings. Therefore, recommended dropping

these factors from the model despite having strong evidence from the literature review and inputs from grounded theory studies conducted in phase 3. However, a model based on the quantitative study with four key factors only (external integration, customer integration, functional value innovation, emotional value innovation) with significant covariances among those towards loyalty and profitability was concluded.

Phase 5 of the study involved the validation of the framework from phase 4 through a case study method. A detailed case study of the market leader “termed as a disrupter in India” was conducted. It not only validated the four key factors from phase 4 but strongly recommended the significance of previously dropped internal integration, economic value innovation, and social value innovation factors in the framework. Hence, a revised model including all eight constructs was validated through SEM again. It resulted in a framework with all the seven factors leading towards loyalty and profitability thereof. However, it also brings out the fact that functional value innovation impacts loyalty directly and in the most impactful way whereas, other factors influence it indirectly with significant covariances among themselves.

Phase 6 of the study concludes the findings of the study with its implications and limitations. This study thus summarizes the existing body of knowledge and reviews the existing key customer-centricity factors, marketing innovation factors, and factors from innovation studies in the telecom and services sector. It then attempts to define the term “customer centric marketing innovation” holistically for the telecom industry scientifically through a multi (mixed) method approach.

This study presents a strong theoretical foundation for further research. This study starts with the theory of consumption values and applies the principles of marketing innovation by leveraging customer-centricity factors. It bridges the gap between customer centricity and marketing innovation theories in the telecom industry for building loyalty and

profitably in a consistent manner. It further attempts to explore the phenomenon of customer centric marketing innovation in detail and contributes to the development of the knowledge pool by identifying underlying themes in the telecom industry context. Thus, it brings up a holistic and clear view of the topic in the scattered area of study.

Lastly, Customer Centric Marketing Innovation (CCMI) model will act as a lighthouse for telecom firms for achieving their mission by conducting marketing innovation in a customer centric manner as it focuses on delivering a simplified and excellent customer experience to the consumers across the customer life cycle stages (discover-buy-deliver-pay-recommend).

## सार

यह अध्ययन निरंतर सेवाओं के माहौल में स्थापित किया गया है जिसमें बैंकिंग, बीमा और दूरसंचार क्षेत्रों जैसे उत्पादों या सेवाओं को शायद ही किसी भेदभाव के साथ परिवर्तित किया जाता है। कीमत में कोई भी बदलाव या कोर वैल्यू डिलीवरी में कभी-कभार कमी ग्राहकों को दूर कर देती है, इसलिए, किसी भी फर्म के लिए दीर्घकालिक ग्राहक वफादारी एक दूर का सपना बन जाती है।

भारत के दूरसंचार उद्योग को सावधानीपूर्वक विश्लेषण के बाद अन्य उद्योगों के बीच चुना गया है क्योंकि यह निरंतर सेवा उद्योग के सबसे जटिल संस्करण का प्रतिनिधित्व करता है। नियमित रूप से बुनियादी ढांचे में भारी निवेश को आमंत्रित करने के लिए निरंतर प्रौद्योगिकी नवाचार (3 जी, 4 जी, 5 जी) है। मोबाइल ऐप अपनाने के उच्च स्तर के कारण ग्राहकों की ज़रूरतें लगातार विकसित हो रही हैं। दूरसंचार कंपनियों के व्यवसाय मॉडल लगातार विकसित हो रहे हैं जिससे दूरसंचार उद्योग के भीतर और पूरे क्षेत्र में अति-प्रतिस्पर्धा हो रही है। भारतीय दूरसंचार उद्योग ने प्रति उपयोगकर्ता औसत राजस्व (एआरपीयू), निवेश पर खराब रिटर्न (आरओआई), और लाभप्रदता में गिरावट के कारण वर्ष 2016 के बाद से अभूतपूर्व विलय और अधिग्रहण और निकास देखा है। साथ ही, भारतीय दूरसंचार उद्योग उच्च गति वाले ब्रॉडबैंड की बढ़ती मांग, गैर-प्रवेशित ग्रामीण भौगोलिक क्षेत्रों, प्रति व्यक्ति आय में वृद्धि, युवाओं की अधिक आबादी और स्मार्टफोन और ऐप्स को बहुत अधिक अपनाने के रूप में विकास के जबरदस्त अवसरों की ओर देखता है। यह एक बुनियादी सवाल उठाता है: ऐसे जटिल वातावरण में लाभ कैसे बढ़ाया जाए?

हालांकि विश्व स्तर पर दूरसंचार व्यवसायों के लिए विभिन्न नवाचार सिद्धांतों और मॉडलों का सुझाव देने वाले दिलचस्प नवाचार अध्ययनों की एक 'एन' संख्या है, लेकिन आश्चर्यजनक रूप से, वे एक व्यापक विपणन नवाचार मॉडल का सुझाव देने से चूक जाते हैं। यह शोध इस कमी को पूरा करने का एक प्रयास है। इस

अध्ययन का उद्देश्य भारतीय दूरसंचार कंपनियों के बीच ग्राहक केंद्रित विपणन नवाचार की घटना को समझना और इसके लिए एक ढांचा विकसित करना है, जो समान सेटअप में अन्य उद्योगों के लिए एक संदर्भ के रूप में काम कर सकता है।

यह अध्ययन छह चरणों में किया गया है। पहला चरण दूरसंचार उद्योग के अवलोकन, ग्राहक केंद्रितता और विपणन नवाचार पर पिछले अध्ययनों पर केंद्रित साहित्य समीक्षा पर केंद्रित है, और दूरसंचार उद्योग में नवाचार अध्ययनों की एक संरचित साहित्य समीक्षा के साथ समाप्त होता है।

अध्ययन के चरण 2 को अनुसंधान अंतरालों की पहचान करने, अनुसंधान उद्देश्यों के निर्माण और शोध प्रश्नों के लिए आयोजित किया गया था। इन कमियों को दूर करने के लिए अध्ययन का चरण 3 आयोजित किया गया था। इसमें दूरसंचार उद्योग में ग्राहक केंद्रित विपणन नवाचार के अनुप्रयोग के संबंध में जमीनी वास्तविकताओं की पहचान करना, इसे प्रभावित करने वाले प्रमुख कारक और आधारभूत सिद्धांत पद्धति का उपयोग करते हुए अन्य प्रासंगिक विषय शामिल थे। उप-विषयों और उन उप-विषयों का प्रतिनिधित्व करने वाले प्रमुख कारकों के साथ ग्राहक वफादारी की पहचान एक मुख्य विषय के रूप में की गई थी। यह ग्राहक एकीकरण, बाहरी एकीकरण, आंतरिक एकीकरण और कार्यात्मक मूल्य नवाचार, भावनात्मक मूल्य नवाचार, सामाजिक मूल्य नवाचार, और प्रमुख निर्माण के रूप में आर्थिक मूल्य नवाचार और ग्राहक वफादारी प्राप्त करने के लिए 65 उपायों (प्रेक्षणीय चर) वाले एक वैचारिक ढांचे के निर्माण के साथ समाप्त होता है। व्यापार लाभप्रदता। यह एक ग्राहक केंद्रित मूल्य नवाचार समीकरण और प्रस्तावित छह प्रस्तावों के साथ समाप्त होता है।

अध्ययन का चरण 4 आगे चरण 3 के निष्कर्षों पर आधारित है और संरचनात्मक समीकरण मॉडलिंग (एसईएम) पद्धति का उपयोग करके वैचारिक ढांचे को मात्रात्मक रूप से मान्य करता है। यह पहले से पहचाने गए छह प्रस्तावों

का परीक्षण करता है और इस बात पर प्रकाश डालता है कि कार्यात्मक मूल्य नवाचार वफादारी की ओर ले जाता है। मॉडल बाहरी एकीकरण और कार्यात्मक मूल्य नवाचार के बीच महत्वपूर्ण सहसंयोजकों की सिफारिश करता है। इसके अतिरिक्त, कार्यात्मक और भावनात्मक मूल्य नवाचार के बीच और बाहरी एकीकरण और भावनात्मक मूल्य नवाचार के बीच क्रमशः महत्वपूर्ण सहसंयोजक भी देखे गए। यह महत्वपूर्ण रूप से आंतरिक एकीकरण, सामाजिक मूल्य नवाचार, और खराब विश्वसनीयता और वैधता रेटिंग के साथ आर्थिक मूल्य नवाचार के महत्व को उजागर करता है। इसलिए, साहित्य समीक्षा से मजबूत सबूत और चरण 3 में किए गए आधारभूत सिद्धांत अध्ययनों से इनपुट होने के बावजूद मॉडल से इन कारकों को छोड़ने की सिफारिश की गई। हालांकि, केवल चार प्रमुख कारकों के साथ मात्रात्मक अध्ययन पर आधारित एक मॉडल (बाहरी एकीकरण, ग्राहक एकीकरण, कार्यात्मक वैल्यू इनोवेशन, इमोशनल वैल्यू इनोवेशन) को वफादारी और लाभप्रदता के प्रति महत्वपूर्ण सहसंयोजकों के साथ संपन्न किया गया था।

अध्ययन के चरण 5 में केस स्टडी पद्धति के माध्यम से चरण 4 से ढांचे का सत्यापन शामिल था। मार्केट लीडर का विस्तृत केस स्टडी "भारत में एक विघटनकारी के रूप में कहा जाता है" आयोजित किया गया था। इसने न केवल चरण 4 से चार प्रमुख कारकों को मान्य किया, बल्कि ढांचे में पहले से गिराए गए आंतरिक एकीकरण, आर्थिक मूल्य नवाचार और सामाजिक मूल्य नवाचार कारकों के महत्व की जोरदार सिफारिश की। इसलिए, सभी आठ निर्माणों सहित एक संशोधित मॉडल को फिर से एसईएम के माध्यम से मान्य किया गया था। इसके परिणामस्वरूप वफादारी और लाभप्रदता की ओर ले जाने वाले सभी सात कारकों के साथ एक रूपरेखा तैयार हुई। हालाँकि, यह इस तथ्य को भी सामने लाता है कि कार्यात्मक मूल्य नवाचार वफादारी को सीधे और सबसे प्रभावशाली तरीके से

प्रभावित करता है, जबकि अन्य कारक इसे अप्रत्यक्ष रूप से आपस में महत्वपूर्ण सहसंयोजकों से प्रभावित करते हैं।

अध्ययन का चरण 6 अध्ययन के निष्कर्षों को इसके निहितार्थों और सीमाओं के साथ समाप्त करता है। इस प्रकार यह अध्ययन ज्ञान के मौजूदा निकाय को सारांशित करता है और मौजूदा प्रमुख ग्राहक-केंद्रित कारकों, विपणन नवाचार कारकों और दूरसंचार और सेवा क्षेत्र में नवाचार अध्ययन से कारकों की समीक्षा करता है। इसके बाद यह बहु (मिश्रित) पद्धति दृष्टिकोण के माध्यम से वैज्ञानिक रूप से दूरसंचार उद्योग के लिए "ग्राहक केंद्रित विपणन नवाचार" शब्द को समग्र रूप से परिभाषित करने का प्रयास करता है।

यह अध्ययन आगे के शोध के लिए एक मजबूत सैद्धांतिक आधार प्रस्तुत करता है। यह अध्ययन उपभोग मूल्यों के सिद्धांत से शुरू होता है और ग्राहक-केंद्रित कारकों का लाभ उठाकर विपणन नवाचार के सिद्धांतों को लागू करता है। यह वफादारी और लाभप्रद तरीके से निर्माण के लिए दूरसंचार उद्योग में ग्राहक केंद्रितता और विपणन नवाचार सिद्धांतों के बीच की खाई को पाटता है। यह आगे ग्राहक केंद्रित विपणन नवाचार की घटना का विस्तार से पता लगाने का प्रयास करता है और दूरसंचार उद्योग के संदर्भ में अंतर्निहित विषयों की पहचान करके ज्ञान पूल के विकास में योगदान देता है। इस प्रकार, यह अध्ययन के बिखरे हुए क्षेत्र में विषय के समग्र और स्पष्ट दृष्टिकोण को सामने लाता है।

अंत में, ग्राहक केंद्रित विपणन नवाचार (सीसीएमआई) मॉडल ग्राहक केंद्रित तरीके से विपणन नवाचार आयोजित करके अपने मिशन को प्राप्त करने के लिए दूरसंचार फर्मों के लिए एक लाइटहाउस के रूप में कार्य करेगा क्योंकि यह ग्राहकों के जीवन चक्र में उपभोक्ताओं को एक सरल और उत्कृष्ट ग्राहक अनुभव प्रदान करने पर केंद्रित है। चरण (खोज-खरीद-वितरण-भुगतान-अनुशंसा)।

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## **List of Abbreviations Used**

- AGR- Adjusted Gross Revenue
- AGM- Annual General Meeting
- AON- Age on Network
- App- Application Portability Profile
- ARPU- Average Revenue Per User
- B2B – Business-to-Business
- BTS- Base Transceiver Station
- BWA- Broadband Wireless Access
- CAGR- Compound Annual Growth Rate
- CCMI- Customer Centric Marketing Innovation
- CMS- Customer Market Share
- COAI- Cellular Operators Association of India
- CRM- Customer Relationship Management
- CSR- Corporate Social Responsibility
- DOI- Diffusion of Innovation
- DOT- Department of Telecommunications
- FDI- Foreign Direct Investment
- FOS- Feet on Street
- FTTH- Fiber to the Home
- 1G- First Generation of Mobile Networks
- 2G- Second Generation of Mobile Networks
- 3G- Third Generation of Mobile Networks
- 4G- Fourth Generation of Mobile Networks
- 5G- Fifth Generation of Mobile Networks

GB- Gigabyte

GOI- Government of India

GSMA- Global System for Mobile Communication

GTM- Go-To-Market

HD Voice- High-Definition Voice

HNI- High Net-worth Individual

ICT- Information and Communications Technology

IoT- Internet of Things

ITU-T- International Telecommunication Union- Telecommunication

ISP- Internet Service Provider

IUC- Interconnect Usage Charge

KYC- Know Your Customer

M &A- Mergers and Acquisitions

MNP- Mobile Number Portability

MoUs- Minutes of Usage

MSME- Medium and Small-Scale Enterprise

MVNO- Mobile Virtual Network Operator

NMS- Network Management System

NTP-1999- New Telecom Policy 1999

NTP-2012- National Telecom Policy 2012

NDPC-2018- National Digital Communications Policy 2018

OEM- Original Equipment Manufacturer

OTT- Over the Top

POTS – Plain Old Telecom Service

QoS- Quality of Service

ROI- Return on Investment

R&D- Research and Development

RMS- Revenue Market Share

SCM- Supply Chain Management

SEM- Structural Equation Modeling

SIM- Subscriber Identity Module

SLA- Service Level Agreement

SME- Small and Medium-Sized Enterprises

SPOC- Single Point of Contact

TAM- Technology Acceptance Model

TOMA- Top-of-Mind Awareness

TRAI- Telecom Regulatory Authority of India

TSP- Telecom Service Provider

USOF- Universal Service Obligation Fund

VoLTE- Voice over Long-Term Evolution