Online ISSN: 3049-0014

# SSN JOURNAL OF MANAGEMENT & TECHNOLOGY RESEARCH COMMUNICATIONS

Vol ( 2 ) No ( 2 ) 2024

May-Jun-Jul-Aug 2025

An Open Access International Peer Reviewed Quarterly Journal

Showcasing Current Academic Research in Management and Technological Sciences

Contents available every 3 months

Published by
Society for Science & Nature

# CONTENTS

MNTRC

SSN Journal of Management & Technology Research Communications Volume 2 • Number 2 • May-Jun-Jul-Aug (2025)

# SSN Journal of Management and Technology Research Communications

An Open Access International Journal of Management & Technological Sciences

Website: https://mntrc.in/about-us/


## About Us

Society for Science and Nature, (SSN) Bhopal, India is a non-profit academic organization, founded in 2008 by academicians from all walks of life: literature, arts, science, technology and nature. The main objective of the organization is to work for the upliftment of the society and the community in large, imparting free services for quality education and research. The Society has been trying to integrate systems of values, ethics, and principles in the students, the future of country's tomorrow. The society has been carrying out academic and educational programs in the country for providing quality education, expertise and training to students and scholars, using state of the art technologies with experienced academicians, teachers, engineers, doctors and social scientists belonging to various disciplines.

Society for Science and Nature, has been publishing an academic international peer-reviewed journal since 2008: **Bioscience Biotechnology Research Communications**, which is in 17th year of successful publication. SSN has ventured into starting yet another international publication, **SSN Journal of Management and Technology Research Communications.** It is an open-access, international peer reviewed quarterly journal for publication of original research articles, exciting reviews, interesting case histories and perspectives in applied areas of management and technology, including biological and medical sciences.

The journal welcomes empirical and analytical papers, reflecting both methodological rigor and practical relevance as well as literature reviews and meta-analyses showcasing and promoting current academic research in upcoming areas of management, science and technology. The insufficient publishable research in the sub-continent, and the developing nations, on the intertwining between management and successful management of science and technology, particularly in areas like health, basic science, engineering, including computer sciences prompted the proposal of this new journal.

The experienced and highly qualified board of editors of this journal will aim to foster diverse investigations of management of science and technology research, encompassing various types of applied areas. We intend to evaluate the theoretical and practical perspectives, utilising a range of methodologies and data—including quantitative, such as surveys, lab experiments, and archival research, as well as qualitative approaches, including case studies and examining the different settings in Management, Science and Technology.

We are particularly interested in – but not limited to – the following research avenues in applied areas of **Management, Science and Technology:** Biological Sciences, Health Sciences, Physical Sciences, Natural Sciences and Engineering.

**Our Vision:** In the coming years we hope and wish that **SSN Journal of Management and Technology Research Communications** will try to maintain high standards of ethical and quality publication, as we believe that it is only quality which can fully utilize the science for our welfare!

We do have a vision to become an important force for pluralism—teaching and disseminating the research skills of management, in living with science and technology. **SSN Journal of Management and Technology Research Communications** strongly believes that it will achieve high standards of ethical and quality publication as we visualize that it is only quality, which can truly help shaping technology for our existence!

### Complaint Policy of SSN Journal of Management and Technology Research Communications

Genuine complaints in Publication: Complaint or expression of dissatisfaction made in honest intention of improvisation are always welcome, as they provide an opportunity and instant moment of attaining quality. The editorial team of SSN Journal of Management and Technology Research Communications shall strive hard to establish, along with the publisher, a transparent mechanism for appeal against editorial decisions or any related matter of publication. If still there are any genuine complaints related to ethical publishing, we are always open to them for the sake of maintaining quality and ethics of publication.

Please write your complaint with Journal title, Vol No/ Issue No /Year /Page numbers, full title of the MS and necessary author details along with type of complaint. The complaint must be about something that is within the jurisdiction of SSN Journal of Management and Technology Research Communications, its contents or process such as authorship, plagiarism, copy right violation, multiple, duplicate, or concurrent publications/ simultaneous submissions etc. Similarly, undisclosed conflicts of interest, reviewer bias or competitive harmful acts by reviewers or any bias of apparent discontentment, backed by logic and judicial discretion will be immediately looked into without any bias and discrimination.

If the Editor receives a complaint that any contribution to the Journal breaks intellectual property rights or contains material inaccuracies or otherwise unlawful materials, a detailed investigation may be requested into, with the parties involved, substantiating their materialistic claims in writing, following the law of natural justice. We assure that we will make a good faith determination to remove the allegedly wrongful material or take actions as per law. All the investigations and decisions are to be documented to the Journal.

Our aim is to ensure that Management and Technology Research Communications follows best practices in publication and is of the highest quality, free from errors. However, we accept that occasionally mistakes might happen, which are inadvertently made or beyond human control, giving opportunity to all parties to decide the best to rectify.

Editorial Complaints Policy: The Managing Editor and staff of Management and Technology Research Communications will make every effort to put matters right as soon as possible in the most appropriate way, offering right of reply where necessary. As far as possible, we will investigate complaints in a blame-free manner, looking to see how systems can be improved to prevent mistakes occurring.

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**Article Withdrawal Policies Of Management and Technology Research Communications**

Submission of an article to Management and Technology Research Communications implies that the work has NOT been published or submitted elsewhere, therefore, the journal is strongly against unethical withdrawal of an article from the publication process after submission. Once the article is submitted, it is the absolute right of the editorial board to decide on article withdrawals. For genuine withdrawal, the corresponding author should submit a request which must be signed by all co-authors explaining the explicit reasons of withdrawing the manuscript.

Accepted articles in final stages of publication if are withdrawn, will entail withdrawal fees. The request will be processed by the editorial board and only serious genuine reasons will be considered if possible. The decision of the editorial board will be final and not negotiable. Unethical withdrawal or no response from the authors to editorial board communication will be subjected to sanction a ban to all authors, and their institute will also be notified.

It is a general principle of scholarly communications, that the editor of a journal is solely and independently responsible for deciding which articles submitted to the journal shall be published. In making this decision the editor is guided by policies of the journal's editorial board and constrained by such legal requirements in force regarding libel, copyright infringement and plagiarism. An outcome of this principle is the importance of the scholarly archive as a permanent, historic record of the transactions of scholarship.

Articles that have been published shall remain extant, exact and unaltered as far as is possible. However, very occasionally circumstances may arise where an article is published that must later be retracted or even removed. Such actions must not be undertaken lightly and can only occur under exceptional circumstances. In all cases, official archives of our journal will retain all article versions, including retracted or otherwise removed articles.

This policy has been designed to address these concerns and to take into account current best practice in the scholarly and library communities. As standards evolve and change, we will revisit this issue and welcome the input of scholarly and library communities. See also the National Library of Medicine's policy on retractions and the recommendations of the International Committee of Medical Journal Editors (ICMJE) concerning corrections and retractions.

**Article withdrawal**

Only used for Articles in Press which represent early versions of articles and sometimes contain errors, or may have been accidentally submitted twice. Occasionally, but less frequently, the articles may represent infringements of professional ethical codes, such as multiple submission, bogus claims of authorship, plagiarism, fraudulent use of data or the like. Articles in Press (articles that have been accepted for publication but which have not been formally published and will not yet have the complete volume/issue/page information) that include errors, or are discovered to be accidental duplicates of other published article(s), or are determined to violate our journal publishing ethics guidelines in the view of the editors (such as multiple submission, bogus claims of authorship, plagiarism, fraudulent use of data or the like), may be withdrawn. Withdrawn means that the article content (HTML and PDF) is removed and replaced with a HTML page and PDF simply stating that the article has been withdrawn according to the Policies on Article in Press Withdrawal with a link to the current policy document.

**Article retraction**

Infringements of professional ethical codes, such as multiple submission, bogus claims of authorship, plagiarism, fraudulent use of data or the like. Occasionally a retraction will be used to correct errors in submission or publication. The retraction of an article by its authors or the editor under

If the Editor receives a complaint that any contribution to the Journal breaks intellectual property rights or contains material inaccuracies or otherwise unlawful materials, a detailed investigation may be requested into, with the parties involved, substantiating their materialistic claims in writing, following the law of natural justice. We assure that we will make a good faith determination to remove the allegedly wrongful material or take actions as per law. All the investigations and decisions are to be documented to the Journal.

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Accepted articles in final stages of publication if are withdrawn, will entail withdrawal fees. The request will be processed by the editorial board and only serious genuine reasons will be considered if possible. The decision of the editorial board will be final and not negotiable. Unethical withdrawal or no response from the authors to editorial board communication will be subjected to sanction a ban to all authors, and their institute will also be notified.

It is a general principle of scholarly communications, that the editor of a journal is solely and independently responsible for deciding which articles submitted to the journal shall be published. In making this decision the editor is guided by policies of the journal's editorial board and constrained by such legal requirements in force regarding libel, copyright infringement and plagiarism. An outcome of this principle is the importance of the scholarly archive as a permanent, historic record of the transactions of scholarship. Articles that have been published shall remain extant, exact and unaltered as far as is possible. However, very occasionally circumstances may arise where an article is published that must later be retracted or even removed. Such actions must not be undertaken lightly and can only occur under exceptional circumstances. In all cases, official archives of our journal will retain all article versions, including retracted or otherwise removed articles.

This policy has been designed to address these concerns and to take into account current best practice in the scholarly and library communities. As standards evolve and change, we will revisit this issue and welcome the input of scholarly and library communities. See also the National Library of Medicine's policy on retractions and the recommendations of the International Committee of Medical Journal Editors (ICMJE) concerning corrections and retractions.

**Article withdrawal**

Only used for Articles in Press which represent early versions of articles and sometimes contain errors, or may have been accidentally submitted twice. Occasionally, but less frequently, the articles may represent infringements of professional ethical codes, such as multiple submission, bogus claims of authorship, plagiarism, fraudulent use of data or the like. Articles in Press (articles that have been accepted for publication but which have not been formally published and will not yet have the complete volume/issue/page information) that include errors, or are discovered to be accidental duplicates of other published article(s), or are determined to violate our journal publishing ethics guidelines in the view of the editors (such as multiple submission, bogus claims of authorship, plagiarism, fraudulent use of data or the like), may be withdrawn. Withdrawn means that the article content (HTML and PDF) is removed and replaced with a HTML page and PDF simply stating that the article has been withdrawn according to the Policies on Article in Press Withdrawal with a link to the current policy document.

**Article retraction**

Infringements of professional ethical codes, such as multiple submission, bogus claims of authorship, plagiarism, fraudulent use of data or the like. Occasionally a retraction will be used to correct errors in submission or publication. The retraction of an article by its authors or the editor under the advice of members of the scholarly community has long been an occasional feature of the learned world. Standards for dealing with retractions have been developed by a number of library and scholarly bodies, and this best practice is adopted for article retraction by us.

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**1. Manuscript Processing**

Upon initial submission of the manuscript, the author will be acknowledged of the receipt via e-mail. Initially the article will be reviewed by any one member of the editorial team to judge the quality of the paper. Articles written in poor English language or not conforming to SSN Journal of Management and Technology Research Communications guidelines will either be rejected or returned to the authors to rectify the shortcomings. Manuscripts deemed proper are then forwarded to at least two subject experts to provide their unbiased input. Articles submitted to SSN Journal of Management and Technology Research Communications are evaluated according to their intellectual merit, without regard to the race, gender, sexual orientation, religious beliefs, ethnic origin, citizenship, political philosophy, or institutional affiliation of the author (s). Editorial decisions on manuscripts submitted to our journals are based on independent, anonymized peer review reports.

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**2. Peer Review Policy**

Unbiased, independent, critical assessment is an intrinsic part of all scholarly work, including the scientific process. Peer review is the critical assessment of manuscripts submitted to journals by experts who are not part of the editorial staff, and is, therefore, an important extension of the scientific process. Each article submitted to SSN Journal of Management and Technology Research Communications for publication is reviewed by at least two specialist reviewers of the concerned area. The dual anonymized review process is strictly followed and in certain controversial cases, the opinion of a 3rd reviewer can also be sought.

**3. Conflict of Interest**

**For Authors:**

All manuscripts for articles, including the original research data-based articles, reviews, editorials, perspectives, comments and letters that are submitted to SSN Journal of Management and Technology Research Communications must be accompanied by a conflict of interest disclosure statement or a declaration by the authors that they do not have any conflicts of interest to declare. All articles that are published in the journal must be accompanied by this conflict of interest disclosure statement or a statement that the authors have replied that they have no conflicts of interest to declare.

To facilitate this policy, all authors must privately disclose 'All their potential conflicts of interest' to the editor of SSN Journal of Management and Technology Research Communications at the time of submission. Authors should also disclose any conflict of interest that may have influenced either the conduct or the presentation of the research to the editors, including but not limited to close relationships with those who might be helped or hurt by the publication, academic interests and rivalries, and any personal, religious or political convictions relevant to the topic at hand.

**Type of Declaration**

If you are submitting your article to SSN Journal of Management and Technology Research Communications. make a 'Declaration of Conflicting Interests' please include such a declaration at the end of your manuscript, following any acknowledgments and prior to the references, under the heading 'Conflict of Interest Statement'.

If no declaration is made, the following will be printed under this heading in your article: 'None Declared' Alternatively, you may wish to state that 'The author (s) declare(s) that there is no conflict of interest'

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According to Oxford University Dictionary, plagiarism is defined as using some ones else's ideas, words, data, or other material produced by them without acknowledgement. It is the unauthorized use or close imitation SSN Journal of Management and Technology Research Communications condemns all forms of plagiarism, following a very strict and vigilant policy of removing this malady. Within the academia, it is considered dishonesty or fraud and offenders are subject to academic censure. Plagiarism can be unintentional or intentional, reproducing academic material without appropriate credit to the original authors (Citations / References).

Similarly self -plagiarism is the re-use of significant, identical or near identical portions of one's own work without citing the original work. This is also known as recycling fraud. Worst form of plagiarism is to steal the whole article from some journal and publish it under one's own name in another journal.Plagiarism, fabrication, unethical or redundant publication grossly violates the editorial policies of SSN Journal of Management and Technology Research Communications which follows best practice guidelines given by the International Committee of Medical Journal Editors (ICMJE) and Committee on Publication Ethics (COPE), as mentioned in the Instructions for Authors of SSN Journal of Management and Technology Research Communications. SSN Journal of Management and Technology Research Communications. follows the COPE Guidelines in addressing potential redundant publication.

To avoid the need for corrective action after publication, please disclose any prior publication or distribution of your manuscript to the Editor when submitting your manuscript to the journal. It is important to ensure appropriate attribution to your prior publication of the material is included in the manuscript and that any quoted materials are identified as quotes so that readers of your article may reference the original work. **All authors submitting their MS to SSN Journal of Management and Technology Research Communications must complete and sign the ethical statement form and append the Plagiarism Check Certificate of their MS along with copy-right form (www.mntrc.in) failing which, their MS will not be processed further.** The Editorial Committee of SSN Journal of Management and Technology Research Communications will take appropriate action against any author found to be guilty of intentional plagiarism or exceeding the standard limits of plagiarism / similarity levels of the text matter in their MS.

The name of author(s) committing plagiarism or using similar text without appropriate citations will also be disseminated to concerned authorities. We do not tolerate plagiarism in any of our publications, and we reserve the right to check all submissions through appropriate plagiarism checking tools. Submissions containing suspected plagiarism, in whole or part, will be rejected. If plagiarism is discovered post publication, we will follow our guidance outlined in the Retractions, Corrections and Expressions of Concern section of these guidelines. We expect our readers, reviewers and editors to raise any suspicions of plagiarism, either by contacting the relevant editor or by emailing at editor@mntrc.in.

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Clinical trials and studies conducted in animals (or not) must have been approved by an Institutional Review Committee (IRC). In the absence of such a formal ethics review committee, the Helsinki Declaration of 1975, as revised in 2000 and/or the Guide for the Care and Use of Laboratory Animals, as adopted and promulgated by the United States National Institutes of Health or Indian Council of Medical Research (ICMR) India must be followed. If doubt exists whether the research was conducted in accordance with the Helsinki Declaration, the authors must explain the rationale for their approach, and demonstrate that the institutional review body explicitly approved the doubtful aspects of the study. In case of any study involving clinical trial, taking of informed consent of patients is mandatory.

**1. On Ethical Issues:**
**Animal and Human Studies**

Ethical declarations in research form an integral part during the submission process of a manuscript to a journal. SSN Journal of Management and Technology Research Communications , requires that the experimental conditions under which animal and human assays and tests are performed are as per standard protocols used worldwide.

Authors must make it clear in writing that the procedures they used were as humane as possible and have been compiled with the guidelines for animal care of their institutions or with national / international guidelines. Studies on animals must comply with the prevailing standards of animal welfare according to Indian Council of Medical Research Guidelines or Committee for the Purpose of Control & Supervision of Experiments on Animals (CPCSEA) in India, and likewise following similar conditions elsewhere, (Ethical Approval Committees/ Institutional Review Board with Approval Number is necessary).For details of animal studies please see : ARRIVE and Guide for the Care and Use of Laboratory Animals.

Studies involving human subjects / patients / and also if the manuscript includes case reports / case series, authors need to provide the following: Name of the Ethical Committees /Institutional review Board, they have obtained consent from along with approval number /ID. Authors should specifically mention that the study was in accordance with the Helsinki Declaration of 1975 (Human Research: Helsinki Declaration as revised in 2013, SCARE criteria etc ).

**Human Studies: Ethical Standards and Informed Consent**

++For studies involving human subjects and volunteers, please indicate in the manuscript, in a section preceding the References, the following statement or an analogous statement that applies to your situation: "All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975 Human research: Helsinki Declaration as revised in 2013.

**Case Reports:** Case Reports should be followed as per the guidelines of SCARE criteria

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1. **Disclosure of Interest**

**Author Contribution:** Authors must mention the nature of contribution as per standard format.

Authors must provide details of any financial or personal relationships that might bias the work being submitted. In a section of text preceding the References, please provide relevant information for each author(s) with regard to any conflicts of interest. All submissions must include disclosure of all relationships that could be viewed as presenting a potential conflict of interest.

**Acknowledgement of sources:**
Proper acknowledgement of the work of others must always be given. Funding acknowledgement must be properly made with grant details, number etc.

**Data access and retention:** Authors may be asked to provide the raw data in connection with a paper for editorial review, and should be prepared to provide public access to such data.

**6. Editorial Committee** The Editorial committee comprises of the Editor- in-Chief, Academic Editors, Executive Editor, Managing Editor, Assistant Editor (s) and the editorial secretaries, who meet frequently to expedite the business of the journal. The editorial committee follows the guidelines provided by the International Committee of Medical Journal Editors in Uniform Requirements for Manuscripts Submitted to Biomedical Journals: Writing and Editing for Biomedical Publication which can be downloaded from http://www.icmje.org/

**7. Advisory Editorial Board**

An international advisory board comprising of members from diverse regions, with significant professional experience in different fields of biological and biomedical sciences helps the Editorial Committee in policy matters when needed. Senior advisory board members from India as well as abroad are members of the journal. Each member is selected due to the expertise and experience in the field of his/her specialization. Affiliations, biographies and addresses of all members of the Editorial Board is displayed on the website of SSN Journal of Management and Technology Research Communications.

**Editorial Policies**

Generally, functioning of the journal is overseen by an Editorial Advisory board, which consists of eminent and competent researchers in the field, who contribute by inviting contributions and proposing expert opinions on the suitability of submissions. The Editorial board consists of the following important positions:

**Editor-in-Chief:** The Editor-in-Chief is primarily the one responsible for activities conducted for the journal and maintains the right of final acceptance or rejection of manuscripts. An experienced academician with quality publications is appointed by the Society for Science and Nature, Bhopal India www.ssn.org the official Publishers of SSN Journal of Management and Technology Research Communications to oversee the entire publication process of the journal.

**Executive Editor:** Executive Editor is who directs processing of the manuscripts which entail soliciting manuscripts from potential contributors, assessing the suitability of the manuscript with respect to its scope, managing the peer review process, devising strategies for the progress of the journal, coordinating with the reviewers and board members, taking decisions on the revised submissions and occasionally assisting the Editor-in-chief in final acceptance or rejection of manuscripts.

**Associate Editors:** Their role is in handling in reporting to the Chief Editor, and supervision of the editorial team, managing submissions, assigning articles, overseeing publication schedules and other matters related to smooth functioning of the journal.

**Academic Editors:** Academic Editors are associates who will assist the Chief / Executive Editors in assessing the suitability of the manuscript with respect to its scope, managing the peer review process, devising strategies for the progress of the journal, coordinating with the reviewers and board members.

**Editorial Board Members:** The international editorial advisory board consists of a panel of researchers having expertise in the relevant field, who are appointed by the authorities of the journal for a specified term of 2 or more years. Editorial board members are required to: carry out peer-reviewing of submitted manuscripts, assess submissions based on the policy and scope of the journal, organize publication of thematic issues, invite new authors and submissions, provide editorials for thematic issues organized under their guest editorship.

**Editorial Team:** The editorial team is made up of experienced and highly qualified researchers and faculty members of different subjects who help the management of editorial process.

**Peer Review**

SSN Journal of Management and Technology Research Communications follows the anonymized peer-review procedure for submissions of all manuscripts to its journal. All submitted manuscripts, after initial evaluation for scope, originality, conformity to the journals instructions and check list, language and academic quality writing are then subjected to an extensive anonymized peer review in consultation with members of the journal's editorial board and independent external referees (usually two reviewers). All manuscripts/chapters are assessed in a time bound frame (usually a month with the reviewers), and the decision based on all the peer reviewers' comments, finally taken by the journal's Editor-in-Chief, is then conveyed to the author (s).

**(Ethics, Duties and Responsibilities of Authors Reviewers and Editors, Plagiarism and its Control, Malpractices and Ethical statements) Link of copy right form and Plagiarism Check Statement.**

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To maintain fair practice we at, Society for Science & Nature (SSN) Bhopal India, the official publishers of SSN Journal of Management and Technology Research Communications strongly believe in strictly following these guidelines for maintaining academic quality and scientific rigor.

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We are deeply committed to fair practice of this publication, especially with regard to plagiarism, collaboration, originality, fraud and conflict of interests.

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Only persons who meet these following authorship criteria should be listed as authors in the manuscript as they must be able to take public responsibility for the content: (i) made significant contributions to the conception, design, execution, data acquisition, or analysis/interpretation of the study; and (ii) drafted the manuscript or revised it critically for important intellectual content; and (iii) have seen and approved the final version of the paper and agreed to its submission for publication. All persons who made substantial contributions to the work reported in the manuscript (such as technical help, writing and editing assistance, general support) but who do not meet the criteria for authorship must not be listed as an author, but should be acknowledged in the "Acknowledgements" section after their written permission to be named as been obtained.

The corresponding author should ensure that all appropriate co -authors (according to the above definition) and no inappropriate co-authors are included in the author list and verify that all co-authors have seen and approved the final version of the manuscript and agreed to its submission for publication. Authors of manuscripts of original research should present an accurate account of the work performed as well as an objective discussion of its significance. Underlying data should be represented accurately in the paper. There should be a clear statement of logical objectives and rationale / justification to take up the study. Study design must be robust and all methods used must be cited properly with standard references so that they can be reproduced easily. A paper should contain sufficient detail and references to permit others to replicate the work.

Discussion must have a critical and comprehensive account of statements supported by up-to-date references. Conclusions must be drawn which must corroborate the data and interpretation highlighting the novelty of the work. References need to be checked for their presence in both text and reference section with all links of refrences from Google Scholar, Pub Med etc.

Fraudulent or knowingly inaccurate statements constitute unethical behavior and are unacceptable. Review and professional publication articles should also be accurate and objective, and editorial 'opinion' works should be clearly identified as such. Submission of a certificate by all MS submitting authors in this regard is mandatory in the form of the Copy Right Form and Plagiarism Check Report of SSN Journal of Management and Technology Research Communications.

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## Editor
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**Prof Dr Ayesha S Ali PhD FSSN CSIR Fellow**

Department of Bioscience and Biotechnology

Saifia College Barkatullah University Bhopal India

Email: editor@mntrc.in

**Mobile : 9755104244**


### Publisher:


**Dr Ayesha S Ali**

On Behalf of Society for Science and Nature SSN Bhopal

Publishers Address: C- 52 Housing Board Colony Kohe

Fiza Bhopal 462001 MP India


### Editor's
### Official Address


**Prof Dr Ayesha S Ali PhD FSSN CSIR Fellow**

Department of Bioscience and Biotechnology

Saifia College Barkatullah University Bhopal India

Email: editor@mntrc.in


### Editorial Office


Executive Editor– editor@mntrc.in

Managing Editor- mntrc.in.info@gmail.com

SSN Journal of Management and Technology Research Communications

C- 52 Housing Board Colony Kohe Fiza Bhopal 462001 MP India

Mobile : 9893015818

Society for Science And Nature SSN Bhopal

Website –http://ssnb.org.in

Journal Website: https://mntrc.in/

Publishers Email: publishers@ssnb.org.in

SSN JOURNAL OF
MANAGEMENT & TECHNOLOGY RESEARCH COMMUNICATIONS

Volume 2 Number (2) May-Jun-Jul-Aug 2025 Online ISSN : 3049-0014

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ISSN 3049-0014

Editor
SSN JOURNAL OF MANAGEMENT AND TECHNOLOGY RESEARCH COMMUNICATIONS
Office: C-52, Housing Board Colony, Koh-e-Fiza, Bhopal - 462 001 (INDIA)
E-mail: editor@mntrc.in, profayeshaali@gmail.com

**SSN Journal of Management & Technology Research Communications**
Vol 2 No (2) May-Jun-Jul-Aug 2025
Society for Science and Nature
E-ISSN: 3049-0014
CrossRef DOI: https://dx.doi.org/10.21786/mntrc

OPEN ACCESS

# Research and Development Fund Management Strategies in the Indian Subcontinent: Analytical Review

**Shaima Ali Miraj***
Department of Public Health, College of Health Sciences,
Saudi Electronic University, 11673 Riyadh, Saudi Arabia.

## ABSTRACT

Research grants are essential elements of scientific and technological development, directly affecting the calibre and extent of the scientific pool from colleges and universities. As the bulk of research in India is carried out by its vast number of colleges and universities, under the aegis of UGC and other state research funding agencies, the technological developments are far from the reach of industries and corporate organisations. It is not surprising that most of this research is career-oriented, aiming only to complete the formalities of career promotions, after the mandatory degrees of research, the PhDs. Institutional researchers under pressure of promotion and burden of teaching, only carry out aimless research, piling useless and irrelevant data. Though India has experienced a consistent rise in research spending, concentrating on critical domains such as healthcare, space exploration, artificial intelligence, renewable energy, and sustainable development. The mismanaged distribution of these monies frequently mirrors overarching governmental agendas and fiscal limitations, affecting the development of these high-tech fields and institutions that garner the most assistance. Such gaps need to be seriously looked into. This needs to be executed properly to compete with the developed world in research and development and to justify India's huge scientific manpower. It's a matter of proper and judicious management of both the funds and the potential of the country. We have to focus on calls for strategic planning and policy formulation that align with the aspirations of positioning India at the forefront of groundbreaking research and technological advancements. There is no dearth of talent and sources; only proper management is required for taking India's huge manpower in research and development to its true potential and efficient deliverables.

**KEY WORDS:** SCIENTIFIC RESEARCH AND TECHNOLOGICAL DEVELOPMENT FUND MANAGEMENT STRATEGIES.

## INTRODUCTION

According to a recent article by Ali [1], choosing science as a career for teaching and research in higher education is on a decline, as other fast-track job options with fast and greater rewards are available in the corporate world. An example cited in his article shows an interesting instance in the US where a young, brilliant academic abruptly left her PhD to become a content provider on social media, earning millions.

If this is the situation, core science may have a back seat soon, as India's biggest educational disadvantage has been the lack of high-quality schools and colleges across the nation, mostly in the majority of the rural population. This is

**Article Information:** *Corresponding Author: shaima.s.ali@gmail.com
Received 25/03/2025 Accepted after revision 28/06/2025
Publication Date: 31st Aug 2025 Page Number: 50-55

Available at: https://mntrc.in/
DOI: http://dx.doi.org/10.21786/mntrc/2.2.1

mainly because, historically, out of all the sectors, in terms of funding, education has never been given much emphasis and priority. The annual higher education budgets speak of the tragedy, coupled with the fact that appointments in such structurally weak institutions, infamous for contractual and low salaries, have often been controversial.

Research grants are essential elements of scientific and technological development, directly affecting the calibre and extent of the scientific pool from colleges and universities. In India, research grants are predominantly allocated by governmental bodies, including the Department of Science and Technology (DST), the University Grants Commission (UGC), the Indian Council of Medical Research (ICMR), the Council of Scientific and Industrial Research (CSIR), Indian Council of Agricultural Research (ICAR) the Department of Biotechnology (DBT) and the Indian Space Research Organisation (ISRO).

Moreover, financial support from international entities such as the World Bank, UNESCO, and the Bill & Melinda Gates Foundation, along with private sector initiatives from firms and philanthropic foundations, enhances the research environment, which is limited to a few prestigious institutes like the IITs and IIMs. In this review, the reasons for the mismanagement of research and development grants to universities and colleges are discussed along with a futuristic perspective and analysis. It calls for strategic planning and policy formulation that aligns with the aspirations of positioning India at the forefront of groundbreaking research and technological advancements.

## METHODOLOGY

Literature survey using library sources like PubMed, Scopus and Web of Science, along with articles from other databases have been critically examined and used in the study. Questions were designed to assess the research and development fund management strategies in the Indian subcontinent. Information was gathered from reliable sources, organising. Steps included researching the topic, drafting a clear summary and making a perspective for the review and concluding it with recommendations.

## OBSERVATIONS AND DISCUSSION

According to the findings of Skill India Report [2], and other reports from industry, special-purpose committees formed over the years have only served to reinforce the challenges and negative perception of the broader education sector (The Indian Higher Education [3].

As the bulk of research in India is carried out by its vast number of colleges and universities, under the aegis of UGC and other state research funding agencies, the technological developments are far from the reach of industries and corporate organisations. It is not surprising that most of this research is career-oriented, aiming only to complete the formalities of career promotions, after the mandatory degrees of research, the PhDs. Institutional researchers under pressure of promotion and burden of teaching, only carry out aimless research on research.

Mainly for these reasons, the majority of the government educational institutions lack basic infrastructure and amenities in major, highly populated states of India. This is more so prevalent in areas where most of the schools are inadequately endowed with even the most basic facilities, such as ideal classrooms, sufficient washrooms, libraries, and laboratories.

This poor infrastructure has an impact on the learning of the students and their development all around, particularly in science and technology and its development meeting global standards. Though India has experienced a consistent rise in research spending, concentrating on critical domains such as healthcare, space exploration, artificial intelligence, renewable energy, and sustainable development. The distribution of these monies frequently mirrors overarching governmental agendas and fiscal limitations, affecting which fields and institutions garner the most assistance. This has been to compete with the developed world in research and development and to justify its huge scientific manpower. It is interesting to understand why Asia's one of the biggest countries' science and technology funding landscape is stuck, and how we can unstick it. Asia’s rise as a global innovation hub is undeniable—think China’s quantum leap in 5G, South Korea’s semiconductor supremacy, and India’s burgeoning biotech scene. Yet, beneath the glittering headlines lies a tangled web of funding friction that slows the pace of truly breakthrough research, leading to bridging the gap from lab to field.

India’s spending on research and development (R&D) is significantly lower than that of global leaders. Based on recent estimates, The United States invests approximately $784 billion annually in R&D, China allocates around $723 billion, whereas India spends about $71 billion. This places India’s R&D expenditure at roughly 10% of US and China’s levels. In terms of GDP share, India spends 0.65%, while the US spends around 3.5%, and China around 2.4%. According to an Indian Express Report [4], investments in science and technology are vital for building India’s capabilities to address developmental challenges and for securing its strategic future. They will determine the nation’s capacity to compete in emerging technologies such as artificial intelligence and quantum computing—especially amid shifting trade policies. This calls for greater investment in cutting-edge research and a stronger culture of innovation across universities, research institutions, and industry. The key question, however, is whether India is investing enough to strengthen its science and technology ecosystem.

Successive governments have repeatedly pledged to raise the gross expenditure on R&D (GERD) from the long-stagnant level of 0.7 per cent to at least 2 per cent of GDP. Yet, India’s GERD-to-GDP ratio has barely moved up for three decades. The country remains far below the OECD average of 2.7 per cent, and behind South Korea (4.9 per cent), Japan (3.4 per cent), and China (2.8 per cent), [5].

About 58-60 per cent of India's GERD is concentrated in strategic sectors such as atomic energy, space, and defence, leaving only 40 per cent for civilian agencies. The university sector—with over 1,100 universities and 48,000 colleges—receives just 7 per cent of GERD despite producing more than half of all science and technology publications, while public companies contribute a mere 4 per cent. How can India overcome this persistently low level of R&D funding? [5].

India's investment in research and development (R&D) has been quite slow, decreasing from 0.82% of its GDP in 2009-10 to 0.64% in 2020-21. As noted by the Department of Science and Technology in a 2023 report, most developed countries spend more than 2% of their GDP on R&D. However, India's R&D investment has been lower than that of Germany (3%), Japan (3.3%), the USA (3.5%), and China (2.4%) [5,10].

Gross expenditure on R&D is driven mainly by the central government, state government, private and public sector industries, and higher education institutions (HEI). The significant expenditure on research in India is incurred by the public sector. In the Union Budget 2025-26, to drive private sector investment in research and innovation, the amount allocated to the Department of Science and Technology (DST) has been increased from INR 8,029 crore to INR 28,508.90 crore, which is a significant share of the government, but how much is technically and scientifically useful is to be seen.

While the budget stressed the role of the private sector in R&D and academia, the issues about research in HEIs remain unresolved. Going forward, the question arises on the measures that need to be taken to ensure effective implementation of the budgetary allocations, keeping in mind the need for industry-academia cooperation, higher research impact, and more interdisciplinary collaboration. India must address the specific challenges that it faces in HEIs to advance its research landscape. Systematic issues such as delays in the disbursement of funds, excessive procedural barriers, bureaucratic inefficiency, and multiple barriers to fieldwork all hinder the development of research in HEIs.

Articles by Ali and Choudhary [1,9] have attempted to identify how these primary concerns make research unsustainable for scholars, especially about the accessibility of funding. The variations in the research impact of public and private education institutions, and recent developments in the research ecosystem, are also discussed. The responsibility of the institutions in the process of disbursing funds, through fellowships or scholarships, cannot be ignored. There have been instances of universities not completely utilising their funds. In 2017, CSIR decided to remove the role of universities for fund disbursement and began paying scholars directly, although the move was followed by further issues with the direct transfer scheme. There have been various instances of funds being withheld from scholars by their universities or colleges [9].

A large portion of R&D funding in India continues to come from the public sector, whereas in countries like the US and China, the private sector plays a major role. Government coffers still dominate R&D spending in many Asian nations (□70-80% of total R&D funding in China and India comes from public sources). Private-sector investment lags far behind the OECD average, especially in basic research. Public money is great for long-term, high-risk projects (quantum computing, advanced materials), but it often gets trapped in bureaucratic red tape. Private capital, on the other hand, moves fast—think venture-backed startups sprinting to commercialise AI algorithms—but shies away from "pure science" that lacks immediate returns of investments (ROIs).

According to Ahmad [4], uncertainty is expected to impact research and development (R&D), a crucial sector of the economy for sustained growth. R&D is widely regarded as a critical source of long-term economic stability and sustainable growth, not only by increasing competition in industries, markets, and macroeconomic economies but also by encouraging production, consumption, and exports. Due to this fact, countries make their economic policies based on their past experiences, present needs, and visualizing futuristic development programs.

However, unfortunately, the plans seldom materialise as conceived because economic policy uncertainty (EPU) often distracts from economic outcomes [5]. On the other hand, in order to generate innovative patents, adequate financial resources for R&D are required. Unfortunately, when budgeting for economic policies, most countries do not prioritise R&D, as noted by Khan et al.[6].

Without proper economic development and planning, R&D will suffer beyond repair. Long-term economic development requires R&D, and countries develop economic policies that envision innovation development programs. However, economic policy uncertainty frequently distracts from economic outcomes [7]. Such economic distractions affect the country's planning and development of science and technology, leading to hindrance of research and development by creating delays and deficits, resulting in economic squeezing where it is required most.

It can be compared to a situation: Imagine a marathon where the government hands you a heavy backpack full of rules ( delayed presentations and grant approvals, time-consuming appraisals, local and government audit cycles as obstacles) while the private sector is the sprinter who wants to dash ahead without carrying extra weight. The race stalls when neither can hand off the baton smoothly.

Or think of another situation: Picture a chef trying to cook a gourmet meal with a broken oven—talent is there, recipe is there, but the kitchen simply can't deliver, due to a shortage of ingredients. Indian labs complain this almost everywhere; national labs often rely on ageing instruments; a 2022 survey showed 43% of researchers cite "inadequate facilities" as the top barrier to high-impact work. In most of our institutions, rapid urbanisation strains grid power, causing intermittent outages that disrupt sensitive experiments.

The large human capital with a continuous talent pipeline produces millions of STEM graduates yearly, yet many end up brain-draining to Western shores or slipping into non-R&D jobs because of limited research-specific funding and stipend support. Notwithstanding the augmented financing, numerous obstacles impede the efficient allocation and application of research grants. Bureaucratic obstacles, delays in money allocation, and a convoluted application procedure frequently dissuade researchers, especially early-career academics, from obtaining funding. Addressing the barriers to policy implementation in India's R&D landscape, specifically in higher education institutions, is essential for fostering a more sustainable research ecosystem. For instance, the budget for research-related initiatives—such as the National Initiative for Design Innovation, Startup India Initiative in Higher Educational Institutions, Unnat Bharat Abhiyan, Implementation of the IMPRINT Research Initiative, and more—dropped from INR 355 crore to INR 327 crore. However, only INR 74.5 crore was utilised in the last fiscal year. This is indicative of a gap between policy and implementation, leading to further deceleration in R&D in India.

The allocation of funding predominantly benefits established institutions like IITs, IISc, AIIMS, and central universities, whilst smaller universities, private institutions, a large number of well-equipped colleges, and regional research centres receive minimal financial assistance. This inequitable allocation hinders the advancement of research in nascent and rural institutions, resulting in a skewed academic and innovation landscape.

In China, more than 1.2 million PhD holders are in science/engineering, but only ~30% stay in domestic academia. In India, approximately 24,000 to 25,000 PhDs were awarded annually around 2017–2019, according to the OECD and All India Survey of Higher Education (AISHE) report. Total PhD enrolment has increased significantly in recent years, reaching over 2.12 lakh (212,474) in 2021-22 [8].

It is a harsh reality that we have rivers that feed fertile valleys but whose waters are siphoned off before reaching the fields. The "river" here is the massive graduate output; the "fields" are domestic research labs starved of funding to retain talent. Researchers spend more time filing paperwork than filing papers, and promising projects stall before they even start. Strategic blind spots are missing the "Blue-Ocean" Opportunities.

Governments often allocate funds to established sectors (defence, energy) while emerging "blue-ocean" fields—quantum sensing, synthetic biology, climate-resilient agriculture—remain underfunded. This harms the generations of the future, affecting scores of aspiring minds to change course. Instead of taking up science as a career, they opt for fast food-like courses to provide them quick returns, abandoning careers that can be nutrients of a starving nation,[1].

There are cases of so many young postdocs who secure modest grants from prestigious funding agencies but land elsewhere as their projects are stalled due to unforeseen and unpredictable events arising out of blues. The projects get stalled, post-doc positions get ended, and eventually, brilliant young scientists join foreign labs that offer thousands of dollars without any barriers. Without simpler IP-sharing frameworks and faster grant disbursement, we risk losing our brightest minds to overseas labs—exactly the opposite of what policymakers want.

We have to develop a policy to avoid this standing at a crossroads: we must leverage a massive public R&D spend or unlock private dynamism to fuel the next wave of breakthroughs. The path forward isn't rocket science—it's simpler processes, shared infrastructure, and strategic foresight that puts talent and risk-capital on the same side of the table.

According to the report of Deka in India Today [12] a Centre of Excellence in Artificial Intelligence for Education has been announced with an outlay of Rs 500 crore, aligning with the government's focus on emerging technologies. However, this promising initiative is overshadowed by a sharp cut in funding for the much-touted 'World Class Institution' scheme, which has plummeted from Rs 1,800 crore in the last Budget to Rs 475 crore, a staggering 73.61 per cent decline. The actual expenditure last year was Rs 1,000 crore, which further underscores the inconsistency between stated intent and financial support.

An allocation of Rs 20,000 crore has been earmarked to drive a private sector-led initiative focused on research, development and innovation. Additionally, over the next five years, 10,000 PM Research Fellowships will be awarded for technological research in IITs and IISc (Indian Institute of Science), with increased financial support. To truly revolutionise education, the government must move beyond incremental increases and substantially invest in research, digital transformation and foundational learning. Otherwise, Budget 2025 risks being yet another case of big promises, small funding [12].

Let us revise our methods of awarding Research Excellence Fellowships, giving priority areas like AI, quantum, and clean energy, using Dual appointment models, letting researchers split time between academia and industry with no bureaucratic red tape. We must adopt one-stop shop online portals (Singapore's Research Innovation Enterprise model) and set outcome-based milestones; reward speed over paperwork.

We do not have industry academic researches resulting in a big disconnect: Corporations prefer importing turnkey tech to nurturing homegrown R&D, leaving universities whispering into an empty void, leading innovations to stay stuck in lab notebooks, never reaching market shelves. We must develop co-funded labs, where industry pays 50 % of operational costs, and IP sharing frameworks that guarantee fair royalties for inventors.

Another complexity is the serpentine web of ethical clearance for clinical trials, which can take months and years, involving red tape of multiple agencies (ICMR/ CPSEA /AYUSH CDSCO) demanding overlapping paperwork. This needs urgent simplification and transparent single window platforms. For instance, let us have a single ethical review board for multi-centre studies. - Clear-cut guidelines on data privacy for genomic research patents and other top areas of public health and welfare.

Publication pressure and quality are another big issue. Publish or perish pushes researchers toward quantity over rigour, inflating low-impact journals. Consequently, it sends Indian research into chaos and sidelines it in global citation networks. This can be done by using quality over quantity incentives (rewarding high-impact papers, patents). Mentorship programs to teach robust experimental designs and achieve time-bound goals.

The barriers—funding scarcity, flaky infrastructure, brain drain, bureaucratic red tape, industry academia divide, regulatory complexity, and publication pressure—are not insurmountable. What can we do next? Pick one lever that resonates most with you—streamlined funding portals, facility upgrades, talent retention fellowships, simpler regulations, or industry academia partnerships—About 43% of researchers cite "inadequate facilities" as the top barrier, where rural labs report ~30% downtime due to grid failures [11, 12] .

DST funds ~₹3,000 crore annually, yet ~40 % of approved projects stall midway due to delayed disbursements [13] (DST Annual Report, 2022), resulting in frustration and brain drain. Only 30 % of Indian PhDs stay in academia domestically (2023 UNESCO Science Report).Top destination: USA (~45 %), followed by Germany (~20 %). Conclusively Indian government is striving hard to increase the nation's research output by several pathbreaking measures. Niti Ayog a Government of India initiative, [13] in its recent report on improving the culture of R&D in Indian Universities and Colleges, found that in response to this imperative, the Government of India has orchestrated various strategic initiatives to fortify R&D in India.

These endeavours encompass targeted missions such as the Startup India initiative, the implementation of schemes like FIST (Fund for Improvement of S&T Infrastructure in Universities and Higher Educational Institutions), PURSE (Promotion of University Research and Scientific Excellence), and the establishment of Science and Technology (S&T) clusters. While these measures have yielded certain improvements, the Global Innovation Index (GII) underscores that, despite progressing from 52 to 40 between 2019 and 2023, India still requires refinement in terms of institutes and infrastructure. Notably, India exhibits strength in market sophistication but lags in creating a robust research ecosystem [13].

According to the report of Niti Ayog [13], there is a considerable teaching-research imbalance in Indian colleges and universities: The challenge of teaching-research imbalance within State Universities and Institutes underscores a systemic issue that impacts the overall academic landscape. This imbalance, characterised by a disproportionate emphasis on teaching over research activities, engenders a host of challenges that permeate the core functions of these institutions.
At the heart of this challenge is the overshadowing of research pursuits by the predominant focus on teaching responsibilities. In an environment where teaching often takes precedence, the allocation of time for research endeavours becomes a scarce commodity. This temporal constraint directly translates into limitations on the depth and breadth of research activities undertaken by faculty members and researchers within these institutions. In addition to time constraints, the teaching-research imbalance manifests in the unequal distribution of resources.

State Universities and Institutes, grappling with competing demands, may allocate a larger share of resources to teaching-related initiatives, inadvertently neglecting the essential components required to foster a robust research ecosystem. This resource asymmetry can hinder the acquisition of research-specific tools, funding for projects, and support for scholarly publications. The detailed report systematically unpacks the diverse challenges faced by these institutions, ranging from funding constraints and teaching-research imbalances to faculty mindset and administrative hurdles. It puts forth actionable recommendations, spanning from the establishment of R&D committees and infrastructure development to faculty incentives, industry partnerships, and international collaborations.

As a nation's technological superiority is a major determinant in its global economic competitiveness, government-led support programs for private firms [14,15] and collaborative R&D projects have gained greater importance in developing technologies [16,17]. As depicted by Leydesdorff and the Stanford University Triple Helix Research Group [18,19], in the Triple-Helix Model, government, universities, and industries all play critical roles in collaborative R &D projects to succeed globally. Building on the triple helix model, the quadruple helix model adds a fourth component to the framework of interactions between university, industry and government: the public, consisting of civil society and the media [20]. Thus for a better understanding and management of research and development funding, it is necessary to bring all the concerned stakeholders together and work in a transparent manner for nations scientific and technological development.

## CONCLUSION

In concluding this article, it is suggested that, as we have so many committees and experts working tirelessly, the conclusion of so many reports should not just be a mere summary gathering dust; it is a compelling plea for the Government of India to recognise the transformative power embedded in these vital recommendations. It calls for strategic planning and policy formulation that aligns with the aspirations of positioning India at the forefront of groundbreaking research and technological advancements. There is no dearth of talent and sources; only proper management is required for taking India's huge manpower of research and development to its true potential and efficient deliverables.

**Conflict of interest:** The author declares no conflict of interest.

**Data Availability:** All data are available from the corresponding author on reasonable request.

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**SSN Journal of Management & Technology Research Communications**
Vol 2 No (2) May-Jun-Jul-Aug 2025
Society for Science and Nature
E-ISSN: 3049-0014
CrossRef DOI: https://dx.doi.org/10.21786/mntrc

OPEN ACCESS

# Leadership Characteristics Influence Employees Satisfaction and Turnover Intention of Industrial and Commercial Bank of China (ICBC): Case of Shanxi Province, China

**Bo Zhang[1] and Nutteera Phakdeephirot[2]***
Rattanakosin International College of Creative Entrepreneurship, Rajamangala University of Technology Rattanakosin, Nakhon Pathom 73170, Thailand

## ABSTRACT

This study explores how leadership characteristics influence employee turnover intention in the context of a state-owned financial institution in China, with a particular focus on the mediating role of job satisfaction. Drawing on Conservation of Resources (COR) theory, the research develops a structural model linking transformational, transactional, and paternalistic leadership styles to employee satisfaction and turnover intention. Data were collected from 452 employees at the Shanxi Branch of the Industrial and Commercial Bank of China (ICBC) through a structured questionnaire. The findings reveal that transformational and transactional leadership significantly reduce turnover intention through enhanced satisfaction. Among paternalistic leadership dimensions, benevolent and moral leadership positively affect satisfaction, while authoritarian leadership increases turnover risk and decreases satisfaction. Mediation analysis confirms the central role of satisfaction in the leadership–turnover linkage, though the indirect effect of paternalistic leadership was not significant. This study contributes to leadership theory by integrating COR theory into the analysis of turnover behavior and offers practical insights for improving retention in high-pressure organizational settings.

**KEY WORDS:** Leadership Characteristics; Job Satisfaction; Turnover Intention; Conservation of Resources Theory; ICBC; Structural Equation Modeling; Paternalistic Leadership.

## INTRODUCTION

In the era of rapid globalization and technological advancement, organizations are facing mounting challenges related to workforce stability. One pressing issue in this context is employee turnover, which imposes significant financial and operational burdens, particularly in high-pressure service sectors such as banking [1, 2]. In China, state-owned banks have witnessed a notable decline in staffing levels, with the Industrial and Commercial Bank of China (ICBC) reducing its workforce for ten consecutive years [3, 4]. The Shanxi Branch, as a regional exemplar, has experienced intensified turnover amid rising performance expectations and growing employee burnout.

Leadership characteristics have emerged as a crucial determinant of employee attitudes and behaviors, including job satisfaction and turnover intention [5]. Grounded in the Conservation of Resources (COR) theory, this study explores how different leadership styles—transformational, transactional, and paternalistic—impact employee satisfaction and, in turn, influence turnover intention. COR theory posits that employees strive to acquire and preserve resources (e.g., emotional support, autonomy, recognition), and leadership behaviors that facilitate such resource gain can enhance satisfaction and reduce the likelihood of turnover [6].

We previous research has established the importance of leadership, few studies have systematically examined the

**Article Information:** *Corresponding Author: nutteera.pha@rmutr.ac.th
Received 25/06/2025 Accepted after revision 25/08/2025
Publication Date: 31st Aug 2025 Page Number: 56-65

Available at: https://mntrc.in/
DOI: http://dx.doi.org/10.21786/mntrc/2.2.2

mediating role of job satisfaction in the Chinese banking context. Addressing this gap, the present study investigates: (1) the direct effects of various leadership styles on turnover intention, (2) the extent to which these styles influence job satisfaction, and (3) the mediating function of satisfaction in shaping employee retention outcomes.

By focusing on ICBC's Shanxi Branch, this study not only contributes to theoretical development in leadership and organizational behavior but also offers practical insights for talent retention and sustainable human resource strategies in state-owned financial institutions.

## Literature Review

**Leadership Characteristics and Employee Outcomes:** Leadership behavior plays a pivotal role in shaping employee attitudes and behaviors, particularly job satisfaction and turnover intention [7]. Among the various leadership typologies, transformational leadership—characterized by inspiration, intellectual stimulation, and individualized consideration—has consistently been linked with higher employee satisfaction and lower turnover intentions [8, 9]. Transformational leaders tend to enhance employees' intrinsic motivation and commitment, thereby reducing their desire to exit the organization [10].

In contrast, transactional leadership emphasizes structured reward systems and performance-based control. While it may not foster deep emotional attachment, transactional leadership can still enhance satisfaction by offering role clarity and immediate feedback [11]. Studies suggest that such mechanisms are particularly effective in high-pressure environments like banking, where clear performance expectations reduce ambiguity and stress [12].

Paternalistic leadership, widely observed in East Asian contexts, integrates authoritarianism, benevolence, and moral integrity. Benevolent and moral dimensions have shown strong positive correlations with employee satisfaction and retention [13, 14], while authoritarian leadership often diminishes satisfaction and increases turnover intention [15, 16]. The divergent effects of paternalistic dimensions underscore the cultural specificity of leadership impacts in hierarchical, collectivist organizations.

**Job Satisfaction as a Mediating Mechanism:** Job satisfaction serves as a critical psychological state reflecting employees' evaluation of their work experience [17, 18]. As posited by the Conservation of Resources (COR) theory, satisfaction arises when employees perceive resource gain—be it through supportive leadership, recognition, or autonomy [19]. High satisfaction, in turn, acts as a buffer against resource depletion and emotional exhaustion, thereby reducing turnover intention [20, 21].

Empirical research consistently confirms the mediating role of satisfaction between leadership and turnover [22]. For instance, studies in banking and education sectors show that leadership indirectly influences retention through its effect on satisfaction [23, 24]. Thus, understanding how different leadership styles shape satisfaction is essential for crafting targeted retention strategies.

**Turnover Intention and Its Antecedents:** Turnover intention is a strong predictor of actual employee exit behavior. Prior literature identifies leadership, job satisfaction, and organizational commitment as its most salient antecedents [25, 26]. Specifically, when employees perceive leadership as resource-draining—through micromanagement, unfair treatment, or lack of support—they experience declining satisfaction and greater intent to leave [27, 28].

In high-stress industries such as banking, where performance demands and emotional labor are high, the interplay between leadership and satisfaction becomes especially crucial in mitigating turnover [12, 29]. This highlights the need for context-specific investigations into leadership mechanisms and employee outcomes.

**Thus, it leads to the following hypotheses:**

**H1:** The stronger the transformational leader, the lower the propensity of employees to leave.

**H2:** There is a significant positive correlation between transformational leadership and employee job satisfaction.

**H3:** Job satisfaction mediates the relationship between transformational leadership and turnover intention.
**H4:** Transactional leadership style is negatively correlated with employee turnover intention.

**H5:** Transactional leadership has a positive effect on job satisfaction.

**H6:** Job satisfaction mediates the relationship between transactional leadership and turnover intention.

**H7:** Authoritarian leadership within paternalistic leadership is positively correlated with turnover intention.

**H8:** Benevolent leadership within paternalistic leadership is negatively correlated with turnover intention.

**H9:** Moral leadership within paternalistic leadership is negatively correlated with turnover intention.

**H10:** Benevolent leadership within paternalistic leadership has a positive effect on job satisfaction.

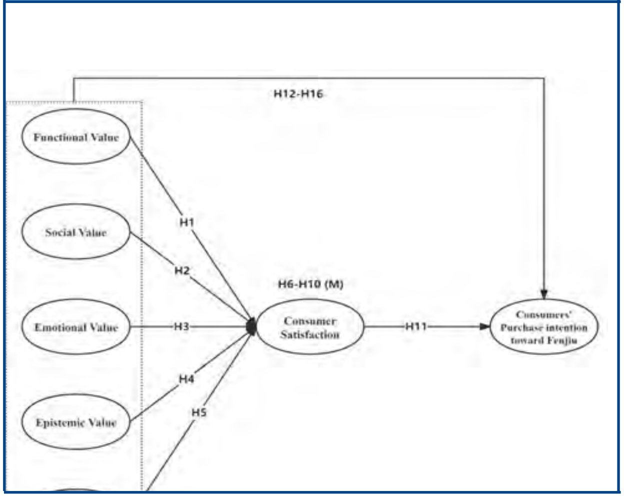
**H11:** Moral leadership within paternalistic leadership has a positive effect on job satisfaction.

**H12:** Authoritarian leadership within paternalistic leadership has a negative effect on job satisfaction.

**H13:** Job satisfaction mediates the effects of paternalistic leadership on turnover intention.

**H14:** Satisfaction shows a negative correlation with turnover intention.

**Figure 1 Theoretical model of study**




**Research Method:** This study employed a quantitative, cross-sectional research design to examine the influence of leadership characteristics on employee satisfaction and turnover intention. The theoretical framework is grounded in the Conservation of Resources (COR) theory, which emphasizes the role of resource acquisition and preservation in shaping individual attitudes and behaviors. The research was conducted among employees of the Shanxi Branch of the Industrial and Commercial Bank of China (ICBC), which represents a typical case of a large state-owned financial institution facing workforce stability challenges. The target population included a wide range of staff members, such as frontline tellers, relationship managers, and middle-level supervisors. A structured questionnaire was distributed online using internal communication platforms, and a simple random sampling method was adopted to enhance representativeness and reduce sampling bias.

A total of 460 questionnaires were distributed, and 452 valid responses were retained for analysis, yielding a response rate of 98.3%. The sample size exceeded the minimum threshold recommended for robust empirical studies, especially those involving multivariate model testing. The inclusion of a pre-test with 42 respondents ensured the clarity and cultural appropriateness of the survey items before full-scale deployment. All variables were measured using established and validated scales, adapted to the Chinese context. All items were rated on a 5-point Likert scale ranging from “Strongly Disagree” to “Strongly Agree.”

Strict confidentiality and anonymity were maintained throughout the data collection process. Participation was voluntary, and respondents were informed of the academic purpose of the study. This ethical approach ensured honest responses and minimized social desirability bias, particularly in the context of sensitive questions regarding leadership perceptions and turnover considerations.

## RESULTS

Table 1 presents the demographic profile of the 452 valid respondents from the Shanxi Branch of the Industrial and Commercial Bank of China (ICBC). The gender distribution is relatively balanced, with 49.1% male and 50.9% female participants. In terms of marital status, a majority of the respondents were married (64.8%), while 35.2% were unmarried. The age composition reveals a predominantly young workforce: 30.5% of employees were aged 22–25 years, followed by 29.4% in the 26–35 age group, and 27.4% aged 36–45. Only 12.6% were aged above 45.

With regard to educational attainment, 50.0% of the participants held a college diploma, 40.0% had obtained a bachelor’s degree, and 10.0% possessed a master’s degree or higher, indicating a generally well-educated sample. Regarding tenure, the majority had been employed at the bank for 3–5 years (33.2%), followed by 1–3 years (26.3%) and over 5 years (26.5%), while 13.9% had less than one year of service.

Job role distribution shows that the largest proportion of respondents worked as general tellers (26.8%), followed by customer service representatives (9.5%), risk control managers (7.5%), and wealth management managers (6.9%). Finally, monthly income levels were concentrated between 3,000 and 10,000 yuan, with 42.5% earning between 3,000–6,000 yuan and 39.4% between 6,000–10,000 yuan. Only a small fraction of employees (2.0%) reported monthly earnings exceeding 20,000 yuan. Overall, the sample demonstrates diverse representation across key demographic categories, enhancing the robustness and generalizability of the findings.

Table 2 shows the descriptive statistics for all measurement items related to the six core constructs: transformational leadership, transactional leadership, authoritarian leadership, benevolent leadership, moral leadership, job satisfaction, and employee turnover intention. Each item was rated on a five-point Likert scale, and the results include the mean, standard deviation, skewness, and kurtosis for each item. Across the transformational leadership dimension (TF1–TF12), the mean scores range from 3.56 to 3.65, suggesting a generally favorable perception of transformational behaviors among ICBC employees. The standard deviations (SDs) remain around 1.00, indicating moderate dispersion of responses. Skewness values are consistently negative, reflecting a tendency toward agreement, while kurtosis values hover near zero, suggesting near-normal distributions.

For transactional leadership (TA1–TA6), the mean scores fall between 3.55 and 3.66, similarly indicating moderate to high employee endorsement of this leadership style. In contrast, authoritarian leadership (AU1–AU3) yields significantly lower mean scores (ranging from 2.36 to 2.41), reflecting employees’ general disapproval or lower exposure to this leadership style. Positive skewness values across all three items indicate a greater concentration of lower ratings, while kurtosis values are slightly negative, indicating a relatively flat distribution. Items measuring benevolent leadership (BE1–BE3) show mean scores around 3.57 to 3.59, again suggesting positive employee perceptions. Negative skewness values confirm this tendency, and low kurtosis values suggest the data distribution is relatively flat but balanced. For transactional leadership (TA1–TA6), the mean scores fall between 3.55 and 3.66, similarly indicating moderate to high employee endorsement of this leadership style.

**Table 1. Essential Information**

| | | Frequency | Percent |
|---|---|---|---|
| Gender | Male | 222 | 49.1 |
| | Female | 230 | 50.9 |
| Marital status | Unmarried | 159 | 35.2 |
| | Married | 293 | 64.8 |
| Age | 22-25 years old and under | 138 | 30.5 |
| | 26-35 years old | 133 | 29.4 |
| | 36-45 years old | 124 | 27.4 |
| | 45 years old and above | 57 | 12.6 |
| Educational background | College | 226 | 50.0 |
| | Bachelor's degree | 181 | 40.0 |
| | Master's degree or above | 45 | 10.0 |
| How many years of service have you been with the company? | 1 years or less | 63 | 13.9 |
| | 1-3 years | 119 | 26.3 |
| | 3-5 years | 150 | 33.2 |
| | 5 years or more | 120 | 26.5 |
| Which of the following categories does your position belong to? | Public Account Department | 24 | 5.3 |
| | Retail Relationship Department | 20 | 4.4 |
| | Private Banking Advisor | 14 | 3.1 |
| | General Teller | 121 | 26.8 |
| | Customer Service Representative | 43 | 9.5 |
| | Wealth Management Manager | 31 | 6.9 |
| | Credit Card Promoter | 21 | 4.6 |
| | Credit Approver | 31 | 6.9 |
| | Risk Control Manager | 34 | 7.5 |
| | HR | 25 | 5.5 |
| | Others | 88 | 19.5 |
| Which of the following ranges does your monthly income ? | Less than 3,000 yuan | 10 | 2.2 |
| | 3,000-6,000 yuan | 192 | 42.5 |
| | 6,000-10,000 yuan | 178 | 39.4 |
| | 10,000-20,000 yuan | 63 | 13.9 |
| | More than 20,000 yuan | 9 | 2.0 |

In contrast, authoritarian leadership (AU1–AU3) yields significantly lower mean scores (ranging from 2.36 to 2.41), reflecting employees' general disapproval or lower exposure to this leadership style. Positive skewness values across all three items indicate a greater concentration of lower ratings, while kurtosis values are slightly negative, indicating a relatively flat distribution. Items measuring benevolent leadership (BE1–BE3) show mean scores around 3.57 to 3.59, again suggesting positive employee perceptions. Negative skewness values confirm this tendency, and low kurtosis values suggest the data distribution is relatively flat but balanced.

The moral leadership items (MO1–MO3) also received favorable responses, with mean scores around 3.58 to 3.61. Skewness is consistently negative, and kurtosis values remain close to zero, indicating a relatively normal distribution of responses. Regarding job satisfaction

(SA1–SA10), the average item scores range between 3.55 and 3.63, reflecting a moderate to high level of satisfaction among respondents. All items show negative skewness, supporting the trend of higher agreement levels. Standard deviations remain close to 1.00, with kurtosis values indicating near-normality.

**Table 2. Descriptive Statistics Results**

| Study variables | Measurement items | Mean | Std. Deviation | Skewness | Kurtosis |
|---|---|---|---|---|---|
| Transformational Leadership | TF1 | 3.630 | 0.985 | -0.774 | -0.102 |
| | TF2 | 3.620 | 1.023 | -0.787 | -0.206 |
| | TF3 | 3.560 | 1.000 | -0.726 | -0.305 |
| | TF4 | 3.610 | 1.044 | -0.742 | -0.265 |
| | TF5 | 3.620 | 1.000 | -0.753 | -0.264 |
| | TF6 | 3.600 | 1.014 | -0.784 | -0.149 |
| | TF7 | 3.600 | 1.013 | -0.743 | -0.218 |
| | TF8 | 3.650 | 0.998 | -0.803 | -0.003 |
| | TF9 | 3.590 | 1.018 | -0.900 | 0.076 |
| | TF10 | 3.620 | 1.004 | -0.826 | -0.079 |
| | TF11 | 3.590 | 0.971 | -0.687 | -0.377 |
| | TF12 | 3.610 | 1.029 | -0.803 | -0.055 |
| Transactional Leadership | TA1 | 3.550 | 1.061 | -0.777 | -0.222 |
| | TA2 | 3.660 | 1.014 | -0.651 | -0.365 |
| | TA3 | 3.590 | 1.007 | -0.747 | -0.310 |
| | TA4 | 3.580 | 0.977 | -0.778 | -0.173 |
| | TA5 | 3.610 | 1.001 | -0.734 | -0.303 |
| | TA6 | 3.620 | 1.004 | -0.740 | -0.245 |
| Authoritarian Leadership | AU1 | 2.400 | 0.961 | 0.804 | -0.070 |
| | AU2 | 2.360 | 1.017 | 0.725 | -0.222 |
| | AU3 | 2.410 | 0.948 | 0.686 | -0.406 |
| Benevolent Leadership | BE1 | 3.590 | 1.033 | -0.862 | -0.080 |
| | BE2 | 3.570 | 1.015 | -0.704 | -0.456 |
| | BE3 | 3.590 | 1.001 | -0.806 | -0.161 |
| Moral Leadership | MO1 | 3.610 | 1.075 | -0.788 | -0.244 |
| | MO2 | 3.580 | 0.965 | -0.723 | -0.169 |
| | MO3 | 3.580 | 1.003 | -0.801 | -0.235 |
| Satisfaction | SA1 | 3.580 | 0.967 | -0.786 | -0.159 |
| | SA2 | 3.570 | 1.030 | -0.716 | -0.385 |
| | SA3 | 3.630 | 1.026 | -0.750 | -0.168 |
| | SA4 | 3.600 | 0.999 | -0.771 | -0.072 |
| | SA5 | 3.600 | 0.970 | -0.788 | -0.081 |
| | SA6 | 3.600 | 1.014 | -0.656 | -0.457 |
| | SA7 | 3.610 | 1.003 | -0.763 | -0.236 |
| | SA8 | 3.550 | 1.016 | -0.833 | -0.135 |
| | SA9 | 3.580 | 1.021 | -0.725 | -0.270 |
| | SA10 | 3.550 | 0.990 | -0.845 | -0.196 |
| Employee Turnover Intention | ET1 | 2.420 | 0.990 | 0.719 | -0.271 |
| | ET2 | 2.330 | 1.008 | 0.819 | -0.100 |
| | ET3 | 2.390 | 1.008 | 0.782 | -0.211 |

Lastly, employee turnover intention (ET1–ET3) exhibits the lowest mean values in the dataset (ranging from 2.33 to 2.42), suggesting that most employees do not strongly express an intent to leave. The positive skewness values indicate that responses are concentrated at the lower end of the scale, and the near-zero kurtosis values suggest an approximately normal distribution.

**Table 3. Reliability Statistics**

| Study variables | Number of questions | Cronbach's α |
|---|---|---|
| Transformational Leadership | 12 | 0.941 |
| Transactional Leadership | 6 | 0.884 |
| Authoritarian Leadership | 3 | 0.798 |
| Benevolent Leadership | 3 | 0.790 |
| Moral Leadership | 3 | 0.786 |
| Satisfaction | 10 | 0.927 |
| Employee Turnover Intention | 3 | 0.794 |

**Table 4. KMO and Bartlett's Test**

| | | |
|---|---|---|
| **Kaiser-Meyer-Olkin Measure of Sampling Adequacy.** | | **.956** |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 10150.367 |
| | df | 780 |
| | Sig. | .000 |

Table 3 reports the internal consistency reliability of each study variable using Cronbach's alpha coefficients. All constructs demonstrate acceptable to excellent reliability, with alpha values exceeding the commonly accepted threshold of 0.70 [30]. Specifically, transformational leadership shows the highest reliability (α = 0.941), indicating excellent internal consistency across its 12 items. Transactional leadership also demonstrates strong reliability (α = 0.884), confirming that the items measuring this construct are cohesive and reliable.

The three dimensions of paternalistic leadership—authoritarian (α = 0.798), benevolent (α = 0.790), and moral (α = 0.786)—all meet the minimum reliability standard, supporting their suitability for inclusion in further analysis. Job satisfaction exhibits high reliability (α = 0.927) across its 10 items, suggesting consistent measurement of employees' affective evaluations of their work. Finally, employee turnover intention achieves a reliability coefficient of 0.794, indicating that the three-item scale adequately captures respondents' intentions to leave the organization. Overall, the results confirm that all scales used in this study are psychometrically sound and appropriate for subsequent structural equation modeling.

**Table 5. Discriminant validity test**

| Latent variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| Transformational Leadership | 0.756 | | | | | | |
| Transactional Leadership | 0.502 | 0.748 | | | | | |
| Authoritarian Leadership | -0.477 | -0.465 | 0.755 | | | | |
| Benevolent Leadership | 0.533 | 0.462 | -0.445 | 0.746 | | | |
| Moral Leadership | 0.447 | 0.457 | -0.439 | 0.48 | 0.743 | | |
| Satisfaction | 0.509 | 0.556 | -0.462 | 0.489 | 0.485 | 0.748 | |
| Employee Turnover Intention | -0.542 | -0.58 | 0.483 | -0.505 | -0.375 | -0.606 | 0.752 |

Note: The diagonal is the square root of the corresponding dimension AVE
***: p<0.001

The results of the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test of sphericity are presented in Table 4 and provide strong evidence for the suitability of the data for factor analysis. The KMO value of 0.956 indicates excellent sampling adequacy, well above the recommended threshold of 0.80 [31], suggesting that the correlations among variables are sufficiently compact to yield distinct and reliable factors.

| Table 6. Structural equation model path test | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Hypothesis** | **Path** | **Estimate** | **β** | **S.E.** | **C.R.** | **P** | **Results** |
| H1 | TF→ET | -0.166 | -0.171 | 0.058 | -2.854 | 0.004 | Supported |
| H2 | TF→SA | 0.160 | 0.164 | 0.054 | 2.979 | 0.003 | Supported |
| H4 | TA→ET | -0.225 | -0.243 | 0.058 | -3.876 | *** | Supported |
| H5 | TA→SA | 0.258 | 0.278 | 0.053 | 4.889 | *** | Supported |
| H7 | AU→ET | 0.122 | 0.123 | 0.061 | 2.005 | 0.045 | Supported |
| H8 | BE→ET | -0.132 | -0.139 | 0.062 | -2.113 | 0.035 | Supported |
| H9 | MO→ET | 0.068 | 0.077 | 0.055 | 1.235 | 0.217 | Non-supported |
| H10 | BE→SA | 0.135 | 0.142 | 0.058 | 2.340 | 0.019 | Supported |
| H11 | MO→SA | 0.143 | 0.164 | 0.051 | 2.816 | 0.005 | Supported |
| H12 | AU→SA | -0.118 | -0.119 | 0.056 | -2.098 | 0.036 | Supported |
| H14 | SA→ET | -0.296 | -0.296 | 0.063 | -4.703 | *** | Supported |

Note: TF: Transformational Leadership; TA: Transactional Leadership; AU: Authoritarian Leadership; BE: Benevolent Leadership; MO: Moral Leadership; SA: Satisfaction; ET: Employee Turnover Intention.
***: p<0.001

| Table 7. Mediation effect bootstrap test | | | | | | |
|---|---|---|---|---|---|---|
| **Hypothesis** | **Mediation path** | **Effect size** | **SE** | **Bias-Corrected** | **95%CI** | **Results** |
| H3 | TF→SA→ET | -0.047 | 0.030 | -0.120 | -0.001 | Supported |
| H6 | TA→SA→ET | -0.076 | 0.035 | -0.171 | -0.024 | Supported |
| H13 | PL→SA→ET | -0.043 | 0.027 | -0.096 | 0.011 | Non-supported |

Note: TF: Transformational Leadership; TA: Transactional Leadership; AU: Authoritarian Leadership; BE: Benevolent Leadership; MO: Moral Leadership; SA: Satisfaction; ET: Employee Turnover Intention; PL: Paternalistic Leadership.

Moreover, Bartlett's test of sphericity is highly significant ($\chi^2$ = 10150.367, df = 780, p < .001), confirming that the correlation matrix is not an identity matrix and that meaningful patterns of relationships exist among the items. Together, these results justify the application of factor analysis and support the construct validity of the measurement model.

Table 5 reports the results of discriminant validity testing using the Fornell-Larcker criterion. The square roots of the AVE values (diagonal elements) for all latent constructs exceed the corresponding inter-construct correlations (off-diagonal elements), indicating satisfactory discriminant validity.

For instance, the AVE square root for transformational leadership (0.756) is greater than its correlations with other constructs, such as transactional leadership (0.502) and employee turnover intention (−0.542). This pattern holds across all variables, confirming that each construct is conceptually and statistically distinct within the measurement model.

Table 6 summarizes the results of the structural path analysis. The findings indicate that transformational leadership significantly reduces employee turnover intention (H1: β = −0.171, p = 0.004) and positively influences job satisfaction (H2: β = 0.164, p = 0.003). Similarly, transactional leadership has a significant negative effect on turnover intention (H4: β = −0.243, p < 0.001) and a positive effect on satisfaction (H5: β = 0.278, p < 0.001), supporting its role in promoting employee retention and well-being.

Regarding paternalistic leadership, authoritarian leadership is positively associated with turnover intention (H7: β = 0.123, p = 0.045) and negatively related to satisfaction (H12: β = −0.119, p = 0.036), suggesting its detrimental effects on employee outcomes. In contrast, benevolent leadership significantly decreases turnover intention (H8: β = −0.139, p = 0.035) and enhances satisfaction (H10: β = 0.142, p = 0.019). Moral leadership, however, has a significant positive effect on satisfaction (H11: β = 0.164, p = 0.005), but its direct effect on turnover intention is non-significant (H9: p = 0.217), indicating a more indirect role.

Finally, job satisfaction exerts a strong negative influence on turnover intention (H14: $\beta = -0.296$, $p < 0.001$), confirming its mediating importance in the leadership–turnover linkage. Collectively, these results support most of the hypothesized relationships and highlight the central role of satisfaction in shaping employee retention outcomes.

Table 7 reports the results of the mediation analysis using bootstrapped bias-corrected confidence intervals. The findings reveal that job satisfaction significantly mediates the relationship between transformational leadership and turnover intention (H3: effect = −0.047, 95% CI [−0.120, −0.001]), and between transactional leadership and turnover intention (H6: effect = −0.076, 95% CI [−0.171, −0.024]). These results support the proposed indirect pathways, indicating that transformational and transactional leadership reduce employees' turnover intention, at least in part, through enhanced job satisfaction.

In contrast, the mediating effect of job satisfaction in the relationship between paternalistic leadership (composite) and turnover intention is not statistically significant (H13: effect = −0.043, 95% CI [−0.096, 0.011]). This suggests that the influence of paternalistic leadership on turnover intention may not operate through satisfaction alone and may involve alternative psychological or relational mechanisms. Overall, the findings underscore the critical role of satisfaction in the leadership–retention dynamic, particularly within transformational and transactional leadership contexts.

## DISCUSSION

This study examined the influence of various leadership characteristics on employee turnover intention, with job satisfaction as a mediating variable, drawing on Conservation of Resources (COR) theory. The findings provide robust empirical support for the majority of hypothesized relationships and contribute to a more nuanced understanding of the mechanisms through which leadership styles shape employee attitudes and behavioral intentions in the Chinese state-owned banking context.

Consistent with prior research, transformational leadership demonstrated a significant negative effect on turnover intention and a positive effect on job satisfaction, confirming H1 and H2. This supports the argument that leaders who provide vision, inspiration, and individualized support foster employees' psychological resources, thus enhancing satisfaction and decreasing the likelihood of exit behavior [25, 32]. The mediation analysis further confirmed that job satisfaction serves as a significant intervening variable in this relationship (H3), aligning with COR theory's assertion that satisfaction functions as both a reflection of resource gain and a buffer against further resource loss [19].

Similarly, transactional leadership was found to significantly reduce turnover intention and increase satisfaction (H4, H5), with satisfaction mediating this effect (H6). These findings suggest that even in hierarchical and results-oriented institutions, the clarity and predictability associated with transactional practices can promote perceived fairness and stability, contributing to higher satisfaction and reduced turnover, particularly when resource security is prioritized [33].

Regarding paternalistic leadership, the three dimensions yielded differentiated outcomes. Authoritarian leadership increased turnover intention and negatively impacted satisfaction (H7, H12), confirming its resource-depleting nature. In contrast, benevolent leadership had a protective effect, significantly lowering turnover intention and enhancing satisfaction (H8, H10), while moral leadership only improved satisfaction (H11) and had no significant direct effect on turnover intention (H9). These findings highlight the duality of paternalistic leadership and reflect prior evidence that authoritarian control diminishes employee autonomy, whereas benevolence and moral guidance foster trust and psychological safety [34, 35].

Interestingly, the composite mediation effect of paternalistic leadership through satisfaction was non-significant (H13), indicating that other mechanisms—such as emotional attachment, trust in leadership, or perceived organizational support—may better explain its influence on turnover intention. This finding aligns with recent calls to investigate alternative mediating constructs within culturally embedded leadership models [36].

Finally, the strong negative relationship between job satisfaction and turnover intention (H14) reaffirms the central role of satisfaction as a proximal predictor of employee retention, consistent with both COR theory and previous empirical studies [37, 38]. It underscores that organizations seeking to minimize turnover should prioritize resource-enriching leadership behaviors that elevate employee satisfaction [39].

## CONCLUSION

This study investigated the impact of leadership characteristics on employee turnover intention in the context of the Industrial and Commercial Bank of China (ICBC) in Shanxi Province, with job satisfaction examined as a mediating variable. Drawing upon Conservation of Resources (COR) theory, the study constructed a theoretical framework to explore how different leadership styles—transformational, transactional, and paternalistic—affect employees' psychological evaluations and behavioral intentions.

The findings reveal that both transformational and transactional leadership significantly enhance job satisfaction and reduce turnover intention, with satisfaction serving as a key mediating mechanism. Among paternalistic leadership dimensions, benevolent and moral leadership were associated with positive outcomes, while authoritarian leadership increased turnover risk and decreased satisfaction. However, the overall mediating effect of satisfaction in the paternalistic leadership–turnover pathway was not significant, suggesting the presence of alternative explanatory mechanisms such as trust or perceived justice.

The study contributes to the theoretical development of leadership and organizational behavior literature by integrating COR theory into the leadership–satisfaction–retention framework. It also offers practical implications for human resource management, emphasizing the need to cultivate resource-enriching leadership practices and foster a supportive, satisfying work environment to mitigate turnover in high-pressure service sectors.

Despite its contributions, the study is subject to limitations, including the cross-sectional design and reliance on self-reported data from a single organizational setting. Future research could adopt longitudinal or multi-source approaches and explore other potential mediators or moderators such as organizational commitment, psychological safety, or leadership–member exchange quality. In conclusion, the study underscores the critical role of leadership in shaping employee experiences and retention outcomes and provides empirical evidence to guide leadership development and retention strategies in China's banking industry.

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**SSN Journal of M**anagement & **T**echnology **R**esearch **C**ommunications
Vol 2 No (2) May-Jun-Jul-Aug 2025
Society for Science and Nature
E-ISSN: 3049-0014
CrossRef DOI: https://dx.doi.org/10.21786/mntrc

OPEN ACCESS

# Branding Strategies On Consumer Buying Preference Towards Dairy Products in India: An Updated Review

**Joe Peter* and Cecil Peter#**
*PhD Research Scholar, Anand Institute of Management Barkheda Nathu,
Neelbad, Bhopal -462044 MP India
Publishing Coordinator, Content Acquisitions & Operations Trusted Media Brands,
7th Floor, Infinity Tower C DLF Cyber City, Gurugram, Haryana – 122002 India

In memory of late Joe Peter PhD Scholar in Management, who strived hard to work on this interesting topic, but fate took him away so early. Cecil Peter, his son, has completed his dream of making this publication possible.

## ABSTRACT

In a cluttered market space, what makes one differ from the other is the branding strategy. Branding is a process by which companies develop a long-term plan to achieve their goal of creating a space in the minds of consumers. A strong branding strategy helps to create an emotional connection between its current customers as well as its prospective customers. Brands have a responsibility to gauge their customer and alter their perception through marketing interventions. Research in marketing and consumer behaviour suggests that some consumers form relationships with brands in much the same way that they form relationships with other individuals and that the nature of these relationships can differ across consumers. The present review article discusses the importance of branding from an economic point of view. It analyses how brands provide important functions to consumers, identifying the source or maker of a product and allows consumers to assign responsibility to a particular manufacturer or distributor. Most important brands take on special meaning to consumers. Due to past experiences with the product and its marketing program over the years, consumers find out which brands satisfy their needs and which ones do not. Therefore, brands provide a simplified device for their product decision. If consumers have some knowledge about the brand, they would easily recognise it, and they would not have to waste time in making a decision. Thus, from the economic perspective, brands allow consumers to lower the search cost for products. Branding strategy plays a very decisive role as far as consumer buying preference is concerned. This review will help the researchers to identify the factors that influence the consumer's buying preference. It would also throw light on the consumer perception. It would stimulate not only public opinion but may have a positive impact on the conscience of the companies, cooperatives and may also help the Government agencies in correcting the policy.

**KEY WORDS:** BRANDING STRATEGIES, CONSUMER BUYING PREFERENCES, DAIRY PRODUCTS.

**Article Information:** *Corresponding Author: cecilpeterjoe@gmail.com
Received 15/06/2025 Accepted after revision 18/07/2025
Publication Date: 31st Aug 2025 Page Number: 66-75

Available at: https://mntrc.in/
DOI: http://dx.doi.org/10.21786/mntrc/2.2.3

**Tribute:**
This publication is dedicated to the loving memory of my father, Joe Peter, whose academic journey was marked by sincerity, intellectual discipline, and a deep respect for research and learning. My father embarked on his doctoral work with great commitment, driven by a genuine interest in understanding branding strategies and consumer buying preferences within the dairy sector. He viewed research not merely as an academic pursuit, but as a way to contribute meaningfully to industry, policy, and society—particularly in areas connected to rural livelihoods and consumer welfare. While his formal doctoral journey remained unfinished, the depth of thought, effort, and Scholarship reflected in this work stands as evidence of his dedication and academic spirit. Bringing this work to publication is a small attempt to honour his memory and preserve the ideas he worked so earnestly to develop. This paper exists because of his vision, discipline, and belief in the value of knowledge. I am grateful to the institutions, mentors, and reviewers who supported the completion and publication of this work.

This publication is offered as a tribute to his life, his unfinished academic pursuit, and the values he lived by—integrity, perseverance, and humility.

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**Cecil Peter, Co-Author**

## INTRODUCTION

Madhya Pradesh is the third largest producer (MPES 2022-23) and consumer of dairy products, where dairy activities form an essential part of the rural economy. It has a very crucial role to play as far as employment generation and income is concerned. Moreover, nearly all of the dairy produce is consumed domestically, with the majority of it being sold as fluid milk. These activities play an important role in generating gainful employment in rural areas, especially for landless, small and marginal farmers and women, besides providing affordable and nutritious food to millions of people.

In a cluttered market space, what makes one differ from the other is their Branding Strategy. Branding is a process by which companies develop a long-term plan to achieve their goal of creating a space in the minds of consumers. A strong branding strategy helps to create an emotional connection between its current customers as well as its prospective customers.

Much like relationships between people, relationships between consumers and brands are a central part of life. Similar to processes between persons, it has been argued that consumers purchase brands to construct their self-concepts and in so doing create self brand relationship [1] It is very confusing to think about the impact of branding. The experiences, attitudes and the association the consumers have with a product or a service are added to form brand perception. The customer, however, determines how your brand is viewed by them. Whatever good product you are marketing, the customers' view towards it makes the difference. Brands have a responsibility to gauge their customer and alter their perception by marketing interventions.

Marketing is a battle of perception"- Rites and Trout's words are echoing in the Indian marketplace where companies are probing, analysing and targeting niches in the minds of the consumers in pursuit of creating a " need- brand" match. Positioning provides a reasonable psychological launching pad for the marketer to attempt and enhance his product proposition. Positioning is basically an attempt by the marketer to compare his brand with a competitive brand or a latent need in the minds of consumers. From psychographic and demographic data, it is possible to consider several alternatives for positioning a brand.

Research in marketing and consumer behaviour suggests that some consumers form relationships with brands in much the same way that they form relationships with other individuals and that the nature of these relationships can differ across consumers. The nature of relationships can take on a spectrum of intensity including the formation of a very intimate bond with brands and, in some extreme cases , a passion that is often associated only with a close circle of friends and family.

India is largely self-sufficient and is also the largest producer of milk. We can see a lot of changes in the Dairy Industry post liberalisation mainly because of the policies of the government. With the change in the economic situation of the country more and more private players are ready to enter the market. This is also in line with global trends, which could further lead to greater integration of Indian dairying with the world market for milk and milk products.

The increase in demand for new products which are more healthier and nutritious is mainly because of the change in disposable income in the hands of the consumers added to that is the availability of foreign brands. With the number of Indian private sector biggies entering the market is growing with Reliance Dairy Foods, Jaypee Group joining the ranks of Hatsun Agro,

Paras, Saras, Britannia and Nestle along with the existing ones, Mother Dairy, Amul and Sanchi. As the organised sector expands, competition would bring in better quality at the same time consumer can be delighted with plenty of options available to them. Here comes the role of Branding Strategy.

**Review of literature:** Branding is a phenomenon that gives identity to a product. As we cannot recognise an individual without a name, surname, residential address and work position same as we cannot be familiar with a product if it has no brand name. Different authors define branding from their own understanding. According to the American Marketing Association [1]- "A brand is a product or service that adds dimensions that differentiate in some way from other products or services designed to satisfy the same needs." Another definition is "brand as the promise of the bundle of attributes that someone buys and provides satisfaction. The attributes that make up a brand may be real, rational and tangible." It provides a brand as a deal of benefits provided by products, [2,3 ].

Branding strategy is the catalyst by which customers understand, purchase, and eventually come to rely on a particular company or product. Strategic branding is the process of developing a long-term plan and goals for becoming a business that customers recognise and prefer over the competition. Strong brand messaging can encourage customers to trust you as an expert and buy from you.

**Importance of Branding:** To Consumers, brands provide an important function. Brands identify the source or maker of a product and allow consumers to assign responsibility to a particular manufacturer or distributor. Most important brands take on special meaning to consumers. Due to the past experiences with the product and its marketing program over the years, consumers find out which brands satisfy their needs and which ones do not. Therefore, brands provide a simplified device for their product decision. If consumers have some knowledge about the brand, they would easily recognise it, and they would not have to waste time in making a decision. Thus, from the economic perspective, brands allow consumers to lower the search cost for products.

Brands can also play a significant role in signalling certain product characteristics to consumers. Researchers have classified products and their associated attributes into three major categories- search goods, experience goods and credence goods. Brands can also reduce the risk in product decisions. Consumers may perceive risks such as financial, physical, functional, social, psychological and time risk. In a gist, to consumers the special meaning that brands take on can change their perception and experience with a product. The identical product may be evaluated differently depending on the brand identification or attributes it carries. Brand Preference: Brand preference can be stated as an option available to a consumer from a range of products in the same category.

Brand preference is when a customer identifies a preferred product and makes that brand a part of his purchase routine. This can happen either from his own experience of using a particular brand or the word of mouth or the perception a consumer carries of a certain brand . The reasoning could even come from the product itself or the brand's messaging or the brand's values. The goal of building brand preference is to create a direct relationship that creates loyal customers who keep your brand top of mind at the point of their purchase decision. Furthermore, once brand preference has been established, a well-known brand has the potential to, in simple terms, advertise itself. Whether that's through a memorable brand image, a good customer service experience, or a brand name that sticks out in the mind of potential customers, these small things contribute to brand preference.

As far as the consumer's preference for buying dairy products is concerned, it would vary depending upon the type of product. A consumer who prefers to buy a particular product say liquid milk may opt for a particular brand but when it comes to value addition the choice of the consumer may change. In this case various other factors would come into play. Quality may be common for all the type / variants of the product. So to understand the preferences one would have to study each product offering [5,6,7].

Neha [7] carried out a detailed study of the intricate relationship between consumers and retailers within the dairy industry in Odisha, India. Recognising the pivotal role of both parties in shaping the dairy product line, the researcher aims to elucidate the factors influencing consumer preference for dairy products while also exploring the strategies and challenges faced by selected retail organisations in meeting these preferences. The primary objectives include identifying key drivers behind consumer choices, evaluating the impact of retail strategies on consumer preference, and assessing the challenges faced by retailers in meeting evolving consumer demands.

Additionally, the study explored the collaborative dynamics between consumers and retailers, considering aspects such as product quality, pricing strategies, and promotional activities.By adopting a dual perspective, the researcher seeks to bridge the gap between consumer expectations and retailer capabilities in the dairy sector. The findings aim to inform both stakeholders about the intricacies of the market, offering insights for retailers to optimize their product offerings and strategies, and for consumers to make informed choices aligned with their preferences and values. This research of Neha[7] contributes to a nuanced understanding of the dairy market in Odisha, fostering a symbiotic relationship between consumers and retailers. The insights generated are anticipated to guide future industry developments, policy formulations, and business strategies, promoting a sustainable and thriving dairy ecosystem in the region.

Naresha et al [8] conducted a study on the economic analysis of milk production in Chittoor and Vishakhapatnam districts of Andhra Pradesh. The cumulative square root frequency method was utilised and farms were divided into small, medium, and large groups based on the number of milch animals. In India, dairying plays a vital role in providing income and employment to masses. Coupled with crop production, dairy farming has been practised in rural households from ancient time. For this study Andhra Pradesh was selected because it is ranked in the top 5 milk-producing states of India. There are over 7000 milk co-operative societies in the state, with an estimated membership of 8 lakh people. Four blocks were chosen at random, two each from

Chittoor and Vishakhapatnam districts. They were chosen based on the districts with the highest and lowest milk procurement per day, respectively. A comparative economic analysis of indigenous cow, crossbred and buffalo inferred that buffalo rearing is more profitable in the Southern and North Coastal regions of Andhra Pradesh. The return to scale effect was evident in buffalo and crossbred dairy farms. Buffalo milk fetches higher prices owing to higher fat content. The farmers still could not realize the full potential of dairying in the study area due to a less developed organised market. Maji et al [9], through their investigation, found that Rapid urbanisation and industrialisation in developing countries such as India have led to drastic lifestyle change leading to lifestyle-related conditions on the social and economic fronts. Therefore, the objective of this review is to present the recent scenario of using herbs in different dairy products. Moreover, the infusion of herbs in dairy products will improve the shelf life. Herbs and spices are natural ingredients that have long been used not only as food flavouring but also for their health benefits. Incorporation of herbs as a source of antioxidants in milk products has met acceptance for the delay of oxidation. Traditional dairy products are suitable carrier for herbs, to incorporate practical features that enhance customer health.

Research is needed to meet technical challenges such as bioavailability and processing conditions in order to produce milk products enriched with herbs. Few workers have conducted a study to examine the moderating effect of health consciousness on the relationship between brand preference and brand loyalty of milk powder marketed in Sri Lanka. Due to self-insufficiency in milk production, Sri Lanka depends to a large extent on imported milk powder from countries such as

The main problem which is arising for dairy farmers is low productivity, the reasons found are that there is lack of knowledge of technical know because of which cattle are suffering from poor genetic potential, there is insufficient health coverage in villages, also there is shortage of water and fodder which affects the milk productivity among cattle's. Milk or dairy units are now facing vast competition among themselves.

Kaur [10] et al conducted a study in eight districts of Punjab State. Value addition refers to the act of adding value(s) to a product to create form, place, and time utility, which increases the value offered by a product or service. It is a practice that enhances or improves the quality and shelf life of an existing product or introduces new products for use. It has a particular importance for the dairy producers, especially where the producers have limited access to the raw milk market or where the value of milk is economically less than the value of value-added products.

Farm value addition of milk and milk products is recognised and highly promoted through value chain approaches for its benefit in terms of improving farm income. It was noticed that the practice of adopting value-added activities for milk was new to many farmers. In conclusion, the maximum level of value addition to milk was observed at the large farm (19.95 per cent). The socio-economic characteristics and their relationship with the level of value addition of milk will help to bring out the socio-economic development of farmers by generating an additional source of income in the state.

has critically examined the Dairy Industry in India with specific focus on Gujarat and Rajasthan. This study examined the efficiency, profitability, cost structure and also suggested ways by which the management can improve their performance. The critical importance of the study is to determine the success or failure of business. The study confines itself to critical appraisal and financial performance analysis of milk producing Dairy sector within the state of Rajasthan and Gujarat. Different aspects of financial performance were explored to get the insight of the actual financial viability of the Dairy Units.

The Dairy distribution sector in India is almost owned by public sector utilities, with the exception to some metropolitan or large urban conglomerates where the private sector is handling the milk distribution function. From the study, it is right to say that the overall financial performance of the Dairy Units is not satisfactory on various parameters, particularly that of the Dairy Units of Rajasthan. The leverage analysis hints towards the absence of any significant magnifying effect or negative leverage effects, while in some cases it is very high so as to induce questions on the reliability of its effectiveness, as the presence of such high level of leverage is due to an abnormally high numerator or abnormally low denominator. Thus, the financial performance of selected Dairy Units of Rajasthan and Gujarat cannot be considered satisfactory, theoretically, based on prevailing basic standards of financial management. But, when we look at the practically possible standards considering the capital-intensive nature and adverse business conditions, the financial performance of Gujarat Dairy Units is far better than many other Dairy Units of our country.

Sharma [12] carried out research on the HACCP awareness and implementation in India has been rare, and hence this study attempted to understand HACCP awareness and the factors motivating HACCP implementation, along with barriers and challenges that impede the success of HACCP implementation in dairy processing in India. A pan-India study was done with a sample of 400 employees in the dairy sector. The research revealed that although training has enhanced the awareness of HACCP processes and systems among employees, major barriers to implementation still exist. High costs of HACCP implementation, its complex nature, lack of incentives, and lack of interest from the management are the major impediments. The need for increased Government support is also felt.

To implement and preserve safe food quality measures as well as enhance the global competitiveness of food quality, effective quality management systems are required, which involve the constant improvement of activities at each functional level and operational domain of the dairy and food industry. Suggestions for better implementation have been given, and also, further research is suggested on implementation at manufacturing centres of downstream value-adding milk-based products.

Anandhi [13] conducted a study in villupuram district of Tamil Nadu to assess the level of awareness about Aavin milk , its consumption pattern and the factors influencing the brand preference. A number of dairy industries were established in major cities and towns of Tamil Nadu state. But a few group of public have not shown keen interest to purchase and consume branded milk like Aavin, rather they prefer to buy the milk directly from the unorganized milk vendors. This style of purchasing milk directly from the unorganized vendors is popular because of the belief of fresh milk rather than milk stored in cold storage by large brands. While analyzing the marketing strategies practised by the branded milk, it is obvious that they are not reaching properly to the consumers living in various geographical segments of study area. Moreover the present pricing policy practiced by the select dairy units are too exorbitant and the consumers of low income category and middle income category find somewhat difficult to consume a cup of milk for each member in a family. The researcher felt that this policy may be changed in order to create more demand among the consumers.

Bhos [14] attempted to investigate and find the economic development of farmers in Ahmednagar district in Maharashtra. Rural India largely depends on Agriculture. The growth in agriculture plays a very important role in social and economic betterment of the people. Dairying is one of the important means for small agricultural farm land farmers. It is a source of employment .India ranks first in milk production, 18.5 % of world production, achieving an annual output of 146.3 million tones during 2014-15 as compared to 137.69 million tones during 2013-14 recording a growth of 6.26 % (Economic Survey, 2015-16). Whereas, the Food and Agriculture Organization (FAO) has reported a 3.1 % increase in world milk production from 765 million tones in 2013 to 789 million tones in 2014.

The success of the dairy industry has resulted from the integrated co-operative system of milk collection, transportation, processing and distribution, conversion of the same to milk powder and products, which in result help to reduce the seasonal impact on suppliers, buyers, retail distribution and milk products. In spite of rapid development of industries, India still remains to be predominantly agricultural country on account of its vast population in villages depending on agriculture. Most of those who depend on agriculture are either small and marginal land holders or landless agriculture labourers.

In his study the researcher has highlighted that the dairy activity plays an important role in the economy from country to state level of India. In the present investigation attempt was made to find out how dairy farming has helped in the economic development of the farmers in Ahmednagar district.

India is largest milk producer of the world. The demand of milk and milk product is increasing rapidly. In present situations it is an excellent opportunity for self employment of unemployed youth for dairy farming. The study concluded that for profit most of the farmers prefer dairy farming, because maximum farmers are agricultural based.

directed a study in Dindigul district by selecting 5 blocks out of the 14 blocks. From each block three villages were selected based on the dairy animal population. In these villages 20 women farmers were selected.Women contribute to 30.80% of the national work force. Lack of training in entrepreneurship is the reason for poor economic progress . As participation of women is crucial for the rural development. The researcher has focussed on understanding the personal and psychological profile of the women farmers in the target area. The results indicated that half of the women egaged in dairying were of the middle age, more than half of the farmers had less than 5 acres of land. More than three-fourth of the dairy farmers availed credit from nationalized banks followed by professional money lenders and private finance institutions.

More than half of the women dairy farmers had high level of innovativeness followed by medium and low levels of the innovativeness. Nearly three-fifth of the women dairy farmers had moderate decision making ability, followed by poor and good decision making ability. More than two-fifth of the women dairy farmers possessed medium and high levels of risk orientation. The study was limited to five blocks of Dinidigul district of Tamil Nadu therefore ample scope is available to investigate into other areas so that a generalisation can be drawn.

**Pandya [16]:** analysed the milk procurement profile of Amar dairy – Amreli. The study covers all the rural and urban dairy co-operative societies functioning inside or outside the Amreli district with affiliation to Amar dairy. The study has examined the analysis of the dairy co-operative societies and milk procurement profile of Amar dairy – Amreli. The main conclusion of the study is presented in order, to sum up, the research findings. It is a remarkable fact that all the village dairy co- operative societies from Amreli district and also some village dairy co-operative societies from nearby talukas of other district have registered under Amreli District Co-operative Milk Producers Union Ltd.

The Amar dairy has to increase the active participation of female members in this sector and try to open the maximum number of female-operated dairy co- operative societies in various villages of the district to improve the level of milk procurement. Very weak dairy co-operative society or society having less number of milk-pouring members should be merged with the nearby strong dairy co- operative society of Amar dairy.

**Neena Mary [17]:** directed a study to understand the relation between consumer behaviour and brand loyalty. From the study, it is clear that when a consumer consumes Packaged Milk, he is able to recognise or recall the particular brand. This ability of the consumer reveals the fact that he is member of a particular product category of milk. It is confirmed that Brand Awareness has created the linkage between product category and brand. Thus, brand awareness involves the belief that it is the only one in the product class. It makes the consumers recognize the products with the well-established brand names.

Today, almost all the people are consuming packaged milk and milk products. Brand preferences of the rural and urban consumers are different. Some buyers are totally brand loyal, buying only one brand in the product group. Most of the buyers sometimes prefer to switch over to other brands.

Therefore, the researcher found it interesting and important to study about different brands and their behavioural ways in the present research.

Further research can be conducted on the following aspects, Comparative study can be conducted on various milk products., Research also can be taken up by using the same variables used in this study to compare two or more brands of Packaged Milk between urban and rural population. Opportunities can be explored by comparing our state brands with brands of other states.

Belliraj et al [18] conducted a study in Coimbatore city. In their study the researchers tried to study the factors influencing the customers to purchase ice cream from branded outlet. The sample of 200 respondents was chosen for the study. 40 respondents from each of the branded ice cream outlet were selected based on a convenience sampling method. Five outlets were selected for the study, namely Boomerang, Bon-Bon, IBCO, Baskin-Robbins and Kwality Walls. According to the researchers the brand awareness plays a big role in influencing the customers purchase decision.

Best marketing and brand awareness activity in the current scenario is advertisement therefore effective advertisement should be made to attract more customers. In Indian ice cream industry where switching cost is negligible, a product can't be placed in the market on the basis of brand alone, but it should match the spending power of the customers and cordial relationship. Various branded companies compete with each other to provide similar features yet at the same time they are distinguished by their flavours, colour, design and service. This made the researcher to find out the reason why the customers prefer particular branded ice cream outlet.

Muwal [19] assessed the marketing practices of milk in India from consumer perspective which was further divided into specific objectives that were necessary to address the problem appropriately. Milk is an interesting product to study food choice behaviour as the Indian milk market offers products from the perspective of quality and safety markedly different, milk products: raw and pasteurised milk. Although raw milk has been widely reported to be a major

source of food pathogens and pasteurization is considered to be a safer option worldwide, Indian consumers still have a strong preference of raw over pasteurized milk. Moreover, major part of the milk distribution in India is handled through informal channels , and government regulation on quality and safety of milk is almost absent , thus, health and safety issues prevail. The researcher has looked into the factors that determine the milk preferences of Indian consumers, the study aims to shed light on the puzzling problem.

Uddin et al [20] have made an attempt to analyze the different actors involved in the dairy products value chain with their value addition activities and estimate the demand for livestock products through measuring the availability of milk, meat and egg at the individual level.In response to the growing needs of buyers and consumers, a large number of stakeholders including farmers, input suppliers, service providers, processing companies namely, Bangladesh Milk Producers' Cooperative Union Limited (Milk Vita), BRAC Dairy and Food Project (Arong), Pran Dairy Limited, Grameen Matso and Pashu Sampad Foundation (GMPF), Rangpur Dairy, etc. are producing different value added dairy products. Bangladesh has possibility to expand its dairy products' trade with other countries establishing value innovation and meeting safety standards properly.

The availability of milk was higher in all the study areas than the national average. The impact of price and income on quantity demand was statistically significant for all the products. The demand for milk was price elastic. However, in spite of various problems and threats, there is a great export potential for value added dairy products along with satisfying the unmet consumer demand in the domestic market for such products. Marketing of foreign dairy products in domestic market, lack of grazing land, lack of quality control measure are the major threats towards developing dairy

enterprise in the country. In spite of all these threats, there is a clear cut and tremendous opportunities for the improvement of dairying. Researchers concluded that there is a great export potential for value added dairy products; and satisfy the unmet consumer demand in the domestic market with such products which will lead in increasing the overall income from livestock sub-sector. Therefore, formulation of long-term plan is essential to increase the production of livestock and livestock products to fulfill the ever-increasing demand of Bangladesh

Alvarez et al [6] in their investigation reported that a more open and competitive dairy market has encouraged certain dairy farms to adopt value-adding strategies in order to achieve a higher profitability, which may be important for farms' survival. This paper investigated the role of some product characteristics in the profitability of value-added products in these farms. The objective of this paper was to investigate the factors that explain the profitability of value-added products in dairy farms. For this purpose we used a unique database from a group of Spanish farms involved in diversification via the elaboration and sale of dairy products. In the present work we considered three product categories (milk, cheese, yogurt) and nine attributes of each product, namely milk-type composition, yield, organic labeling, PDO certification, maturation period, expiration period, size of the sales unit, returnable packaging and distribution

Karthik [21] analysed the need for training and developing human resources in the Dairy sector. By making people employable and educated citizens, human resource development and training add to the financial improvement and accomplish full business and advance social integration. Education and training are a means to empower people, improve the quality and organisation of work, enhance citizens' productivity, raise workers income, improve competitiveness, and promote job security and social equity inclusion. Training grows the skills and knowledge of everyone and makes a huge contribution to business success.

The private sector has been at the vanguard of capacity addition in the dairy processing segment for well over two decades. Since 1993 till a couple of years ago, the private sector created more capacity than cooperatives. Industry experts point out that as early as 2011, the National Dairy Development Board (NDDB) had said it is estimated that the capacity created by the private sector "in the last 15 years equals that set up by cooperatives in over 30 years"

In his article "Dairy Development in India and Challenges" about challenges in the nature of entry of private dairies Dr.P.A.Koli (2008) says, Low qualities of milk, more passive membership in societies in villages, low investment in Research and Development, undesirable politics etc. He suggested amalgamation of dairy societies in village; develop a self financial model, brand development and quality control etc. Researcher concludes that the dairy co-operatives in India are facing several challenges. However the united efforts will help them to service in future. They need to apply scientific and professional management. In his article on "Milk and Milk Products and Prevention of food adulteration Act."

Sankaran [22] examined the socio-economic conditions of the dairy farmers, especially in the areas of income, employment, and profit through the dairy farming activities. He limited his study to Tirunelveli district of Tamil Nadu and on the production and marketing of milk through dairy cooperative and vendors also. The focus was on benefit of dairy farmers, knowledge about the Dairy activities, problem faced by the beneficiaries, suggestion of dairy farming for good performance for better economic status. The vital significance of dairying lies not only in the production of milk but also in being instrumental for introducing far – reaching changes in the socio – economic dimension of rural life. The researcher concludes that dairying is more suitable for women in rural areas. In the rural area majority of the women are housewives and are unable to go for other work because there is no one in their house to look after the children if they go to work. So they remain at home, and their earning is zero.

Malathi[23]analysed to understand the quality practices of select dairies in AP-CRDA region, this study specifically addresses the critical success factors of total quality management implemented by the first mover and the market leader in an Indian dairy industry and these practices were considered as the benchmark standards, to assess the quality performance of Critical Success Factors of Total Quality Management implemented by the management of select dairies in AP-CRDA region, i.e. Vijaya dairy, Sangam dairy and Model dairy.

From the empirical evidence, in this study, it is found that the effective implementation of CSFs of TQM will bring a considerable impact on customer satisfaction levels. It is, therefore, understandable for managers that the practical implementation of TQM practices resulted in an improvement in customer satisfaction levels. The managers of selected dairies agreed that TQM is a guiding philosophy in their respective organizations. It is identified that only Amul dairy is following Kaizen model of quality tool whereas other dairies are not following any of the models or tools of total quality management. This study is limited to some selected units in Dairy industry; further empirical studies can be carried out by selecting dairies in other parts of the country. Efforts to include dairies in other parts of country will certainly enhance the significance as well as the validity of the results.

Regassa [24] directed a study to understand the significant aspect of supply chain management in milk and dairy products. It attempts to do so by identifying the current status of milk and dairy industry in Ethiopia. The Ethiopian economy is highly dependent on agriculture; and lack of extensive research in this sector

has been one of the causes for its ever undeveloped status. This study with its focus on dairy production portion of the agriculture in the country, suggests new ways to approach the sector which would bring about enormous change both in the outlook and practice. Second, most of the previous researches did not emphasize on the supply chain coordination. But this study emphasizes in this matter. It develops new models and recommendations that would help in overcoming the obstacles of this sector.

Dairy supply chain establishes link between the partners and activities engaged in delivering milk and its products to the end consumer in order to satisfy customer needs. This chain is comprised of production, handling, processing, packaging, storage, distribution and retail.

Patnaik and Kumar [25] instituted a study on customer response towards dairy products in southern Odisha. In view of increasing demand for dairy products, the study of consumer behaviour is an attempt to understand and predict human action in buying process. Consumer behaviour encompasses a vast area, including Consumer motivation, preference, purchasing patterns, etc. The study of sellers' behaviour comprises of dealers' and distributors' behaviour towards buyers/consumers of milk products. Hence the study of consumer behaviour concentrate to answer the question like; why, when, where, what and how do the consumer buy. The study of consumer behaviour is quite new and relatively unexplored. Dairy industry has developed adequately in India and many brands emerge in the dairy market in India.

Thunga [26], through his analysis, found that India ranks first among the world's milk-producing nations. About three-fourths of the population lives in rural India and about 38 per cent of them are poor. An important source of income is dairying, which is a source of subsidiary income to small and marginal farmers. cooperative dairies played a predominant role in Andhra Pradesh until last decade. Dairy Industry had to cope up with transformation in the Indian economy. Farmers have shown great interest in dairying as a business in Andhra Pradesh during the last one decade. Many Dairy farms with modern design were opened , but most of them could not sustain because of the high labour cost.

The cooperative dairy firms which occupied predominant place till the last decade also faced several operational problems and could not survive due to the entry of private firms. Therefore this study on Financial Performance of Dairy Industry in Andhra Pradesh with Special Reference to Coastal Region is taken up with the general objective of assessing the financial performance of selected cooperative dairies. The research conducted was to analyse the financial performance of cooperative dairy units in Andhra Pradesh. Future researchers could throw light on financial performance of cooperative dairy sector in other states.

Chittoor district. From the literature review done by the researcher the important variables that need detailed study are consumer perceptions, influences from various quarters , preferences that vary due to different psycho-sociological and demographic factors. Agriculture being the backbone for the social and economic development of India and more so dairying , limited research was carried out to improve the market potential for dairy products. Hence, in this study the researcher focused on understanding consumer of dairy products, which is important for dairy companies and government to design effective marketing strategies.

The researcher felt the importance of understanding the consumer behaviour which is deeply rooted in the marketing concept. The marketing programmes and policies depend upon the consumer behaviour which is extremely important in todays market. A careful study of consumer behaviour will facilitate the marketer in determining the various expectations of the consumer that acts as input in designing marketing strategies. As consumer behaviour being dynamic, it is necessary to continuously study, analyse and understand the target consumers to take effective decisions with respect to marketing mix elements i.e., product, price, promotion and distribution. Hence, it is a must for business organizations to understand the behaviour of consumers to survive in the market.

Naik [28] found that milk and milk products have always been part of our consumption habits. Post -independence cooperative system in the dairying has registered many success stories, which have resulted in deriving socio-economic benefit. According to Naik there is a lack of studies on the Dairy marketing and therefore an attempt has been made by the researcher to undertake a study on the effectiveness of marketing practices.

The researcher has analysed both primary and secondary data, which would help both the dairies, namely Vijaya and Model Dairy to work on the policies for improving the quality, delivery, distribution, sales promotion and customer relationship management and help to improve the efficiency of marketing. India's dairy market is multi-layered like a pyramid, with a base made of a vast market for low-cost milk.

The bulk of the demand for milk is among the poor in urban areas, whose individual requirement is small, maybe a glassful for use as a whitener for their tea and coffee. Nevertheless, it adds up to a sizable volume – millions of litres per day. Though Andhra Pradesh is one of the agriculturally advanced states in the country, it has a high level of rural poverty. The four states and union territories in South India contributed 20 per cent share (about 20 million metric tonnes) to the total milk production in the country with a growth rate of 3.2 per cent per annum in the past ten years. Andhra Pradesh, being the highest producing State in South had a growth rate of 6.6 per cent in the last decade. Market-oriented dairy is considered to have a good potential for contribution to the process of economic development in developing countries in several ways. Dairy marketing essentially includes processing as a function that creates the form utility of products. The existing processing functions that create form utility and involve costs and returns are treated as marketing functions and are included in the marketing subsystem.

Milk marketing in India remains grossly primitive compared to its western counter parts: it begins with the largely unregulated sector, which handles the majority of the milk production, providing ample opportunity for malpractice. On the other hand, it will be impossible for most producers to market their milk without the presence of these market intermediaries. The Cooperative Societies Act continues to be restrictive rather than enabling, even though the Anand Pattern milk producers cooperatives have emerged as the most stunningly effective institutional model for milk marketing, [28].

Renuga Devi [29] in her examination has tried to analyse the gap by investigating the milk marketing chains and factors affecting the milk market in Virudhunagar District of Tamil Nadu State. Marketing channels are the keys for improving production and distribution. Surplus production cannot enter the market due to inefficient knowledge about the marketing chains. Producers have no idea and knowledge about the marketing chains of milk in Virudhunagar District. Due to poor marketing and transport facilities, there is a wide price gap between terminal and primary markets.

Prabhakar [30] has examined the Dairy Development in its various dimensions which clearly indicate that there is no comprehensive study on the Development of Dairy industry in Nellore District and the socio-economic conditions of farmers who depend either mainly or partially on Dairy industry for their livelihood. Since Dairy activity is almost an inalienable part of life of the farmers in general and in Nellore district in particular, there is a need to undertake a comprehensive micro level study in Nellore district to analyse the development of dairy industry and its contribution to the upliftment of socio-economic conditions of farmers in Nellore District.

From the analysis it was concluded that the affairs of the cooperative society should be managed with the true spirit of the 'cooperative organization'. The disputes among the members should be amicably sorted out and solved. The district level authorities should take lead role in ensuring such an atmosphere in every village level society. So that the members can share the gains of good governance and the growing demand for milk and milk products in the wake of increased awareness on health and nutritious values of milk and milk products for all age groups among the vast segment of middle income group in India.

Bahadur [31] in his paper states that out of all types of organisation like government, private companies, trusts , cooperatives, the cooperative form of organisation is the ideal form as it is better equipped to serve the economically weaker section. The Dairy cooperatives has not only helped in the economic development but also has generated employment. Dairy cooperatives have helped in reducing poverty, improving nutrition, education and women development. Sixty per cent of beneficiaries were small, marginal farmers, or landless producers.This particular paper has therefore tried to throw light on socio-economic changes and women empowerment taking place through dairy cooperatives. Some of the findings given in the paper are that all (100%) milk producers believe that socio economic condition of milk producers are improved due to functioning of dairy cooperatives.

Uma Devi [32] carried out a study to understand the consumers' awareness of milk in the Coimbatore district. The researchers were of the opinion that In order to frame a suitable marketing strategy for effective penetration into the defined segments, the milk producers as well as the distributors must have a thorough understanding of the level of awareness of the consumers. This will also help

them in designing marketing communications best suited for the target audience. Above all Government agencies can take steps to conduct the awareness programs in a better way, considering the consumers present level of awareness. The study may also help the Non Government Organisations (NGOs) make the public aware of the nutritional values of milk. In addition to this, the study will help the consumers to know about the facts and proper way of usage of milk which they should be aware of. are doing this well in our country. The reason why cooperative is doing well is because of the fact that Dairy cooperatives link the village producers and the town consumers by eliminating middlemen. Dairy industry is of crucial importance to India. The country is the world's largest milk producer, accounting for more than 13 per cent of world's total milk production. It is the world's largest consumer of dairy products, consuming almost 100 per cent of its own milk production.

Dairying has been considered as one of the activities aimed at alleviating the poverty and unemployment especially in the rural areas in the rain-fed and drought-prone regions. The progress in this sector will result in a more balanced development of the rural economy.

The study concludes that milk traders earn higher daily wages than the general average for their category of workers. Other benefits from dairying include animal manure, which is used on the farm or sold for cash. Manure is important in sustaining smallholdings and accounts for the apparent profitability of dairying, even where dairying appears to be a loss making enterprise.

Gajendran [33] in his examination found that the Co-operative movement started in India in the last decade of the 19th century with a view to release the farmers from the clutches of money lenders and to improve the economic conditions of the farming community as a whole. The golden era of Co-operative movement began after India gained independence. Within two decades of independence the membership of primary societies had increased four times while the share capital and working capital increased by 23 and 31 times, respectively.

According to Gajendran the Studies are available on the perception of the farmers towards the societies. Therefore the researcher in his study has confined himself to analyze the perception of the office bearers of the Dairy co-operatives who are involved in collection of milk from the farmers and supply to district milk unions.

Vijaykumar [34] has examined the details regarding the development of dairy cooperatives in India, Tamil Nadu and Madurai. It started with the growth of cooperative movement and highlighted the need for dairying in India. The dairy development during the three phases of Operation Flood Programme has also been examined.Concluding the study researcher felt training should be given to the members for implementation of innovative technology in their dairy farms. In addition, efficient marketing technique should be imparted to the members. To increase milk production, more Women Milk Producers' Cooperative Societies can be started in each and every village.

## CONCLUSION

In the past, dairying was considered to be a secondary means for the farmers. Now it has grown to the status of an industry and sometimes is independent of Agriculture. Dairying has played a predominant role in strengthening India's rural economy. The reforms in the Indian Dairy industry can basically be attributed to the White Revolution. As a result of Operation Flood, today India is the largest producer of milk. India today is the largest producer. Operation Flood has linked production and consumption. The future of the Dairy industry will have to be built on quality and quantitative services. The present article provides a detailed review on the role of branding in the marketing of dairy products and Branding Strategy plays a very decisive role as far as consumer buying preference is concerned. This review will help the researchers to identify the factors which influence the consumer buying preference . It would also throw light on the consumer perception. It would stimulate not only public opinion but may have a positive impact on the conscience of the companies, cooperatives and may also help the Government agencies in correcting the policy.

**Conflict of interest:** The authors declare no conflict of interest.

**Data Availability Statement:** Data are available with the corresponding author on request. request

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**Funding:** Nil.

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**SSN Journal of Management & Technology Research Communications**
Vol 2 No (2) May-Jun-July-Aug 2025
Society for Science and Nature
E-ISSN: 3049-0014
CrossRef DOI: https://dx.doi.org/10.21786/mntrc

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# Effect of Sales Promotion in the Refrigerator Market in India: An Empirical Analysis

**Sandeep Sharma***
Pro-Vice Chancellor, Sikkim Skills University,
Namthang, South Sikkim, Sikkim India

## ABSTRACT

This empirical analysis investigates the impact of sales promotion strategies on consumer behavior and brand performance in the refrigerator market in India. Using a mixed-method approach combining dealer surveys, consumer questionnaires, and secondary market data, the research highlights how promotional tools such as discounts, free gifts, and credit schemes influence purchase decisions, brand loyalty, and market share. The study was conducted in South Delhi, with a sample size of 40 dealers. Findings reveal that Whirlpool and LG dominate sales due to aggressive promotional campaigns, while Videocon and Godrej rely more on credit schemes and dealer incentives. The results emphasize that sales promotion significantly boosts short-term sales, customer acquisition, and dealer engagement, though its long-term brand-building effects remain limited. Sales data confirmed the superior effectiveness of consumer-centric incentives like free gifts and demonstrations. Dealers, however, preferred discounts, showing the need for balanced strategies. Festive seasons, especially Diwali, proved to be peak opportunities for promotional success. While promotions are powerful short-term tools, sustainable brand equity requires integration with product innovation and customer relationship management.

**KEY WORDS:** SALES PROMOTION, REFRIGERATOR INDUSTRY, CONSUMER DURABLES, BRAND LOYALTY, INDIA, MARKETING STRATEGIES.

## INTRODUCTION

India's consumer durable market has witnessed remarkable expansion over the last two decades, fuelled by rising disposable incomes, rapid urbanization, and improvements in retail infrastructure. Refrigerators, being an essential household appliance, constitute a major share of this market. According to industry estimates, the Indian refrigerator market reached over USD 4.6 billion in 2022 and is projected to grow at a CAGR of 10–12% through 2030, driven by both urban penetration and rural demand [1,2]. Despite increasing penetration, India still lags behind Southeast Asian economies, suggesting considerable room for growth.

Competition in the sector has intensified with the entry of multinational corporations (MNCs) such as LG, Samsung, and Whirlpool, who have challenged the dominance of long-established domestic brands like Godrej and Videocon. The competitive environment is characterized by price wars, frequent new product launches, and promotional innovations designed to appeal to India's highly price-sensitive consumers [3]. Consumers today seek not only affordability but also energy efficiency, digital features, and value-added services, forcing manufacturers to differentiate themselves beyond product design.

**Article Information:** *Corresponding Author: sandy96007@gmail.com
Received 20/05/2025 Accepted after revision 18/08/2025
Publication Date: 31st Aug 2025 Page Number- 76-80

Available at: https://mntrc.in/
DOI: http://dx.doi.org/10.21786/mntrc/2.2.4

In this context, sales promotion has emerged as a key differentiator. Unlike advertising, which builds long-term awareness and brand equity, sales promotion offers immediate incentives that drive consumer purchases and strengthen dealer relationships. Schemes such as discounts, exchange offers, scratch cards, extended warranties, and zero-interest EMI finance options have become common, particularly during peak sales periods like Diwali and New Year [4] . These promotions are critical in ensuring short-term sales growth in a market where consumer loyalty is fragile and switching costs are low.

Moreover, the effectiveness of sales promotion extends beyond consumers to retailers and distributors. Trade incentives, including bulk discounts, dealer contests, and attractive credit terms, play a central role in determining which brands dealers prioritize for display and promotion in their outlets. Several studies have highlighted that in India's semi-urban and rural markets, where brand visibility often depends on retailer influence, trade promotions can be as critical as consumer promotions [5,6]. This dual impact makes sales promotion a strategic tool for market leaders as well as emerging players.

Therefore, this study seeks to analyze the impact of sales promotion in India's refrigerator market, focusing on how these strategies influence consumer purchase behavior, dealer preferences, and overall brand performance. By systematically evaluating promotional tools such as discounts, gifts, credit schemes, and seasonal offers, the research provides insights into the effectiveness of sales promotion in shaping market outcomes. It also highlights the need for balancing short-term sales gains with long-term brand equity and customer relationship management [7,8].

**Research Methodology:** The study utilizes a descriptive–analytical mixed-method design, appropriate for examining existing trends and relationships in promotional effectiveness within the refrigerator market. South Delhi was selected purposively due to its demographic diversity, dense concentration of both MNC and domestic brand dealers, and active consumer durables market. Primary data were gathered through structured questionnaires and in-person interviews with retail dealers, while secondary data were compiled from reputable sources such as ICRA Reports, Euromonitor, and recent trade magazines. This methodological approach supports triangulation by blending empirical field insights with documented industry trends [ 9].

A total of 40 dealers were selected through purposive sampling, ensuring representation of major brands like LG, Whirlpool, Samsung, Godrej, Videocon, and Electrolux. Sample size justification followed Cochran's formula, which calculates ideal samples based on desired confidence level, margin of error, and estimated proportion ($z = 1.96$ for 95% confidence, $p = 0.5$ for maximum variability, and a typical 5–10% margin of error). Although Cochran's recommendation yields a larger theoretical sample, opting for 40 provided practical rigor while maintaining feasibility and relevance, given the focused dealer population.

The questionnaire was structured into sections covering brand awareness, availability, pivotal purchase factors (promotions, service), dealer perceptions of trade schemes, and promotional efficacy. Consumer awareness was measured as the percentage of dealers reporting familiarity of customers with specific refrigerator brands, while sales performance was assessed through market share figures based on unit volumes sold. In addition, dealer engagement was examined by analyzing access to and utilization of promotional programs such as credit schemes, discount policies, and dealer incentives. Finally, promotional effectiveness was gauged through dealer rankings of various promotional tools, including discounts, free gifts, exchange offers, and seasonal promotions, to determine their relative impact on consumer purchase behavior.

To ensure content validity, the instrument was reviewed by two marketing experts. Reliability testing used a pilot sample of five dealers, resulting in a Cronbach's alpha of 0.82, indicating strong internal consistency in line with accepted applied research benchmarks. Establishing validity and reliability reinforces the reliability of insights derived from dealer feedback. This multifaceted evaluation provided both statistical and narrative insights, enabling a nuanced understanding of how promotional strategies shape market dynamics and offering implications for balancing short-term sales growth with long-term brand equity.

**Statistical Analysis:** The collected data were subjected to descriptive and inferential statistical analysis. Descriptive statistics, including percentages, frequency distributions, and mean scores, were used to summarize dealer responses on brand availability, promotional schemes, and consumer awareness levels. To test the significance of associations between promotional tools and sales outcomes, chi-square tests were applied for categorical data, while correlation analysis was employed to examine relationships between sales performance and the use of specific promotional strategies. All analyses were carried out using SPSS version 26, ensuring methodological rigor and replicability.

## RESULTS AND DISCUSSION

The study evaluated three core dimensions—Brand Availability and Consumer Awareness, Sales Performance and Purchase Behavior, and Dealer Preferences and Promotional Effectiveness—to provide a comprehensive understanding of the impact of sales promotions in the Indian refrigerator market. The results indicate clear differences in brand presence across the South Delhi market. As shown in Table 1, LG (35 dealers) and Samsung (30 dealers) were the most widely available brands, while Electrolux was present in only 19 outlets. This pattern reflects a strong distribution advantage for LG and Samsung. Statistical analysis revealed a significant correlation ($\chi^2 = 12.47$, $p < 0.05$) between brand availability and consumer awareness.

It was also witnessed that awareness levels for LG and Samsung were nearly universal (100%), whereas Whirlpool showed comparatively lower awareness, aligning with its weaker distribution network. These findings underscore that availability and visibility directly influence consumer familiarity and brand salience in competitive markets. Sales figures, presented in Figure 1, highlighted Samsung as the market leader with 30% of sales, followed by LG (25%) followed by Godrej (18%). Whirlpool share was only 6%, indicating its diminishing presence despite offering aggressive dealer discounts. ANOVA tests comparing sales performance across brands confirmed significant variation ($F = 8.21$, $p < 0.01$), demonstrating that promotional effectiveness and brand reputation together influence market outcomes.

| **Table 1. Availability of Different Brands** | |
|---|---|
| **Brand** | **Availability (No. of Dealers)** |
| LG | 35 |
| Haier | 23 |
| Samsung | 30 |
| Godrej | 21 |
| Electrolux | 19 |
| Whirlpool | 10 |

**Figure 1: highlights the sales figures of the different refrigerator brands by the different vendors in last 6 months**

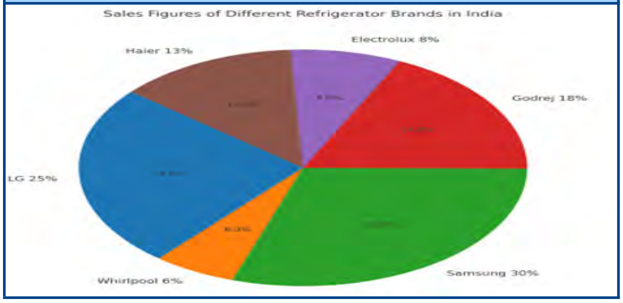
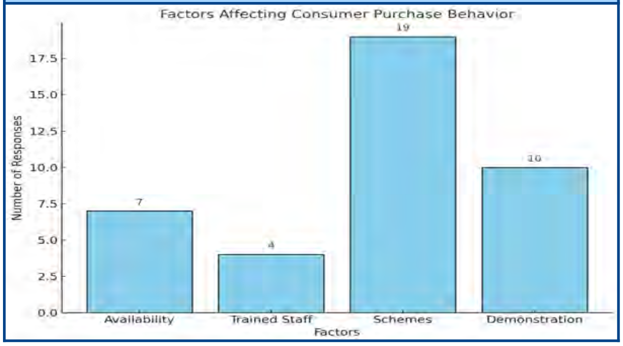



**Figure 2: shows factors affecting consumer purchase behavior**

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Further, Fig 2 shows that promotional schemes (48%) and demonstrations (25%) were the most influential factors shaping consumer purchases, while availability and staff knowledge were less impactful. These results suggest that Indian consumers prioritize direct financial incentives and hands-on product demonstrations over traditional brand attributes when making purchase decisions.

**Figure 3: 1shows the Best promotional schemes for dealers**


The analysis of dealer responses provides deeper insights into the mechanics of sales promotion. As detailed in Figure 3, discounts emerged as the most preferred promotional tool among dealers (52%), followed by incentives and free gifts. Whirlpool, despite weak consumer sales, offered the highest dealer discounts, while Samsung and LG dominated consumer-focused promotions such as free gifts and scratch cards. Chi-square analysis confirmed significant associations between brand and preferred promotional scheme ($p < 0.05$), highlighting how different companies tailor strategies for either consumers or dealers. Seasonal analysis in Figure 3 shows that 100% of brands offered promotions during festivals like Diwali, while virtually none did so in peak summer months. This reflects a deliberate strategy of leveraging cultural consumption cycles, aligning promotional intensity with consumer demand peaks.

The findings of this study clearly establish the primacy of distribution strength in shaping brand presence and consumer awareness in the South Delhi refrigerator market. LG and Samsung, with the widest dealer coverage, also reported near-universal consumer awareness, while Whirlpool and Electrolux lagged significantly in both availability and recognition. This aligns with prior studies which highlight that physical availability and shelf visibility are the most critical determinants of consumer recall and purchase intent in emerging markets, [10,11]. The statistically significant correlation between availability and awareness in this study ($\chi^2 = 12.47$, $p < 0.05$) reinforces the principle that distribution breadth directly fuels consumer mindshare in competitive retail environments.

Sales performance further corroborated these patterns, with Samsung and LG capturing the largest market shares, while Whirlpool, despite offering aggressive dealer discounts, recorded a marginal 6% share. This outcome reflects the interplay between consumer-facing promotions and brand reputation. Research in Indian consumer durables has shown that while price promotions can temporarily boost sales, long-term performance depends on sustained consumer trust and innovation [12,13].

The significant ANOVA results ($F = 8.21$, $p < 0.01$) from this study validate these insights, demonstrating that a brand's market outcomes cannot be attributed to promotions alone but are instead shaped by a synergy of reputation, distribution, and consumer engagement strategies. Consumer purchase behavior analysis highlighted the dominance of promotional schemes (48%) and demonstrations (25%) as key decision-making factors. This supports the observation that Indian consumers, particularly in urban centers, remain highly price-sensitive and respond more readily to tangible incentives than to abstract brand equity, [14, 15].

Demonstrations, which provide experiential assurance, were also found influential, aligning with international studies suggesting that "touch and feel" opportunities reduce perceived purchase risks in high-involvement products like refrigerators,[16]. This indicates that consumer decision-making in this segment is still largely transactional rather than relational, emphasizing immediate value and utility. From the dealers' perspective, discounts were the most preferred promotional tool (52%), followed by incentives and free gifts. This dichotomy between dealer preferences and consumer responsiveness reflects a dual challenge for manufacturers.

While consumers prioritize direct benefits like price reductions or gifts, dealers seek backend margin support to secure profitability. Previous work by Blattberg and Neslin [17], also underscores that channel partners often respond more strongly to margin-enhancing schemes than to consumer-pull campaigns. Whirlpool's reliance on heavy dealer discounts, contrasted with Samsung and LG's consumer-oriented promotions, explains its limited consumer traction despite strong dealer incentives. These findings suggest that aligning consumer-pull and dealer-push strategies remains essential for sustained growth.

Finally, the seasonality of promotions, with near-universal emphasis during Diwali and neglect during summer months, demonstrates the cultural anchoring of sales promotion strategies in India. Prior studies confirm that festive periods contribute up to 40% of annual sales in consumer durables, making them the natural locus for promotional intensity [18,19,20,21] . However, the absence of promotions during peak summer, traditionally the period of highest refrigerator demand, suggests a missed opportunity for companies to complement natural demand with tactical promotional support.

This misalignment points to the need for a more balanced calendar of promotions that integrates cultural cycles with seasonal product demand to maximize impact. This study was limited to South Delhi, with a small sample of 40 dealers. Consumer perspectives were captured indirectly through dealers, which may not fully reflect end-user behavior. Future studies could include pan-India consumer surveys, longitudinal tracking of promotional impacts, and comparative analysis across other durable categories like washing machines and air conditioners.

## CONCLUSION

This study highlights the critical role of sales promotions in driving consumer behavior and brand performance in India's refrigerator market. LG and Samsung dominated due to strong distribution and consumer-focused promotions, while Whirlpool and Electrolux lagged despite heavy dealer discounts. Sales data confirmed the superior effectiveness of consumer-centric incentives like free gifts and demonstrations. Dealers, however, preferred discounts, showing the need for balanced strategies. Festive seasons, especially Diwali, proved to be peak opportunities for promotional success. While promotions are powerful short-term tools, sustainable brand equity requires integration with product innovation and customer relationship management.

**Conflict of interest:** The Author declares no conflict of interest.

**Data Availability:** Data will be available from the corresponding author on reasonable request.

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**SSN Journal of Management & Technology Research Communications**
Vol 2 No (2) May-Jun-Jul-Aug 2025
Society for Science and Nature
E-ISSN: 3049-0014
CrossRef DOI: https://dx.doi.org/10.21786/mntrc

# Can Global Legal Frameworks Harmonise Taxation and Consumer Protection in Cross-Border Digital Trade?

**Bikram Das[1], Tanuj Kanti Dey[2] and Dipangshu Dev Chowdhury[3]**
[1]Assistant Professor, Faculty of Management and Commerce, ICFAI University Tripura, India
[2]Ph.D. Research Scholar, Department of Management, Mizoram University, Aizwal, Mizoram, India
[3]Assistant Professor, Faculty of Management and Commerce, ICFAI University Tripura, India

## ABSTRACT

Digital trade has revolutionized international trade by making cross-border transactions almost instantaneous through the use of e-commerce, cloud computing and digital payments. However, this fast-paced digital evolution revealed major gaps in policy and law. Issues such as taxation, consumer protection and regulatory convergence are being negotiated. Tax systems developed decades ago are based on the concept ofphysical presence, so digital services are under-taxed; and consumer protection laws, which are territorial in nature, are not sufficient to protect consumers who purchase from sellers across borders. From a doctrinal and comparative legal analysis this contribution investigates these questions in light of the (multilateral) processes under the OECD and WTO and domestic law/regional agreements (e.g. the EU DSA, India's Equalization Levy, CPTPP and RCEP).It reviews the extent to which tax systems can raise revenues from digital activity, the difficulties associated with online consumer protection, and the extent of global harmonization. The findings reveal that there is an un-fragmented governance and it is generally weak in linking tax and consumer policies particularly for the developing countries. The study proposes that regulation of digital trade should be fair and this can be accomplished through agency cooperation, capacity development, ethical responsibility, and enhanced multilateral collaboration that will advance equity, growth, and consumer good in the era of digital trade.

**KEY WORDS:** DIGITAL TRADE, TAXATION, CONSUMER PROTECTION, GLOBAL GOVERNANCE

## INTRODUCTION

Digital trade is the principal driver of the global reorganization of economic relations among countries, firms, and consumers. In fact, small and medium enterprises (SMEs) are able to go global with ease through the said platforms like Amazon, Alibaba, etc, without the need for them to establish physical infrastructure in foreign lands. Meanwhile, cloud computing, digital payment systems, and real-time data analytics are the technologies that allow firms to open their offices in different jurisdictions at the same time.

Cross-border digital services increased at the rate of about 25 per cent every year during the last five years, the OECD

**Article Information:** *Corresponding Author: dipangshuchowdhury@gmail.com
Received 15/07/2025 Accepted after revision 24/09/2025
Publication Date: 31st Aug 2025 Page Number: 81-85

Available at: https://mntrc.in/
DOI: http://dx.doi.org/10.21786/mntrc/2.2.5

study shows[1], implying that both the scale and the speed of digital trade expansion are enormous. Behind the unprecedented expansion in digital trade is a complex set of regulatory issues. Consumer protection laws and traditional tax systems, let alone international trade agreements, were built around physical goods that move through intermediaries, require physical presence and are subject to territorial jurisdiction. At the same time, digital goods and services are intangible and, in many cases, disaggregated, taking their source from the same source.

The combination of these factors wreaks havoc with governments that want to tax, consumers that want to complain, and firms that want to comply. Consumers are the most at-risk segment of society. Cross-border transactions may expose consumers to various risks including dealing with counterfeit sellers, misrepresented products, delivery delay and even misuse of personal information. The enforcement of consumer rights is however, not under one roof but is fragmented among the national authorities with very limited powers extraterritorially. The asymmetry creates not only gaps in protection and trust, but also suggests that these digital marketplaces may be less credible than their regular counterparts.

Besides that, digital trade raises questions about fairness. Rich countries and big corporations have the upper hand over poor countries as they do not lack the technological and financial resources to take advantage of the loopholes, while the latter cannot do much but suffer from the loss of tax and from their consumers being at the risk of the lack of protection. Digital trade, without law and policy interventions, has the potential of deepening the existing global inequalities that predominantly benefit multinational platforms while harming small players and consumers in less developed regions. This paper addresses the issues of taxation, consumer protection, and global harmonization, i.e., three interrelated areas of digital trade governance. The areas examined by this work show the countries and international organizations the way to a digitally inclusive, transparent, and efficient economy that manages to strike a balance between innovation, revenue generation, and consumer welfare.

**Research Problem and Significance : Problem Statement :**One of the main challenges for existing legal frameworks that are designed to regulate digital trade is their limitation. Ancient tax systems founded on the concept of a “permanent establishment” could not tax companies operating without a physical footprint. In practice, this has allowed global tech platforms such as Google, Facebook and Amazon to generate huge profits in a range of countries without paying significant tax in those countries, creating fiscal disparities.

Furthermore, consumer protection regimes are in large part national and reliant on national enforcement models. Where consumers have disputes with sellers in cross-border sales, redress is difficult to secure for consumers and enforcement across borders is patchy. Conflicting rules on taxation, data privacy and consumer protection between countries impose compliance costs on businesses, reduce the predictability of trade and may discourage small and medium-sized enterprises from participating in cross-border trade.

**Significance of the Study:** However, traditional tax systems based on the concept of ‘permanent establishment’ are not suitable for taxing enterprises operating without a physical presence. Essentially, multinational platforms like Google, Face Book and Amazon can earn huge profits in many different countries, but pay taxes almost entirely in their home jurisdictions, creating fiscal inequities. Furthermore, consumer protection regimes tend to be national and rely on enforcement at the national level. Consumers cannot obtain remedies easily for their disputes with sellers over cross-border transactions and at the same time, international enforcement of such remedies is unstable when they have disputes with sellers over cross-border transactions. Differing tax, data privacy, and consumer protection rules that exist across countries create compliance challenges for businesses, reduce the predictability of trade, and may be a disincentive for SMEs to participate in cross-border trade.

**Research Questions:** This research paper poses the following questions:

1. In what manner do the current tax systems consider the income generated by digital cross-border platforms?
2. What are the foremost limitations of consumer protection through the enforcement of law in cross-border e-commerce?
3. How far do the OECD and WTO frameworks lead to the harmonisation of digital trade governance?
4. Which institutional reforms would be instrumental in creating a digitally inclusive market?

**Research Objectives**

1. To identify major issues in the imposition of taxes on cross-border digital transactions and services that influence fiscal equity and market fairness.
2. To measure the performance of current laws protecting consumers in the context of global e-commerce.
3. Analysis of the function of the international organisations (OECD, WTO, UNCTAD) in standardising the policies related to digital taxation and consumer rights.
4. To suggest global strategies that facilitate regulatory consistency, financial fairness, and the fair expansion of the digital trade.

## Literature Review

**Taxation of Digital Commerce:** The issue of taxation has been at the centre of challenges in the digital trade governance area. Existing tax systems are designed in such a way that they are closely linked to the physical presence of a business. However, digital companies are operating in a virtual environment and in most cases, they do not have offices, employees, or even stock in the countries from which they have users. In an attempt to overcome the difficulties, the OECD’s BEPS framework leads to in the first place (reallocation of profits to market jurisdictions) and, secondly minimum global tax[6,7] that address such issues. However, the rollout of these ideas is not consistent and some critics are convinced that these initiatives are more geared towards benefiting wealthy countries. Thus by themselves, India's Equalisation Levy and EU's digital-services tax as examples look like good solutions to the problem of domestic revenue losing but they do carry a risk of trade disputes.

**Consumer Protection:** While consumers are engaged in cross-border transactions, they may be exposed to multiple kinds of risks such as fraud, non-delivery, and personal data misuse. OECD & UN consumer protection Guidelines[2] set up the rules of the game by suggesting cross-border cooperation, transparency, and accountability; however, these rules are hardly ever enforced. The European Union Digital Services Act (2022) is a well-organized full-spectrum coding of platform liability[4], content moderation, and grievance redress. India's Consumer Protection (E-commerce) Rules (2020) are intended to regulate e-commerce marketplaces[5] but are weak on cross-border enforcement. Dispute resolution online platforms, for instance, the EU ODR system, are potentially a part of the answer; however, they are dependent on global reciprocity to function fully.

**Harmonization Efforts:** Both multilateral and regional frameworks are designed to facilitate the harmonization of digital trade regulations among members. WTO's Joint Statement Initiative intends to set global standards[8] but the engagement in it is still voluntary. The OECD promotes interoperability, which enables countries to adjust regulations to their domestic needs and at the same time keep them compatible across borders. The regional agreements, such as CPTPP[10], RCEP[11], and USMCA[12] have incorporated digital trade chapters that deal with the topics such as data flow, consumer protection, and cybersecurity. Nevertheless, the extent of the commitments causes variability, leading to the so-called "fragmented multilateralism." Successful harmonization depends on how well national regulations are in line with the international standards and at the same time allow policy space for the developing countries.

**Research Gaps:** Despite an increasing number of studies, there are still large gaps:

**Integration of Taxation and Consumer Protection:** Most of the studies focus on fiscal or consumer issues separately; only a handful of research works consider their intersection and consequences for the digital-trade policy.

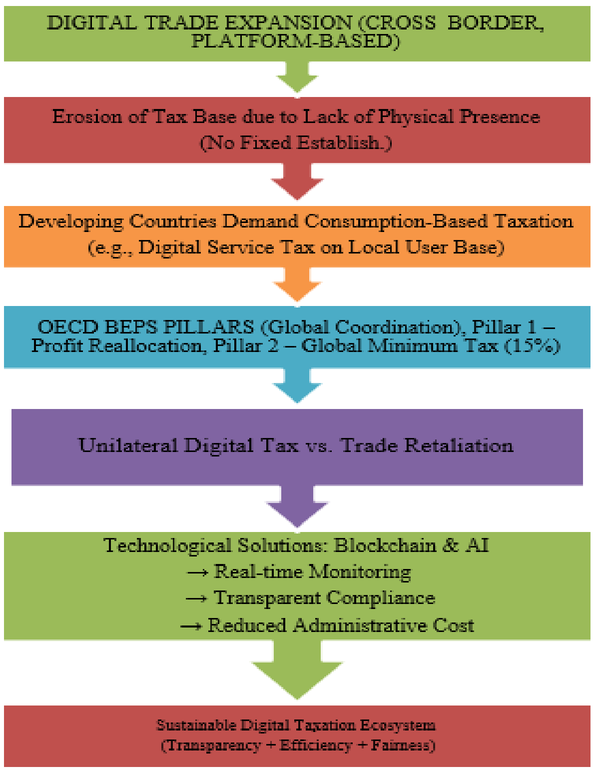
Empirical Evaluation in Less Advanced Countries The Influence of Digital Trade on Taxation, Market Access, and Consumer Welfare in developing countries remains to be fully examined.

**Consumer Redress:** There is little research on the efficacy of cross-border ODR schemes.

**Comparative analysis of harmonization efforts:** The regional and plurilateral processes, are fragmented, a holistic consideration that brings out their cumulative shaping of a balanced (for developing countries) regime of digital-trade governance is absent.

**Analysis and Discussion Taxation Challenges:** Trade in the digital era challenges fixed establishment ideas. In the digital business, significant income is earned without having a physical presence in the jurisdiction, leading to an erosion of the tax base. Developing countries are pushing for consumption taxation because the profits are earned from consumers that are active in their markets.OECD's BEPS Pillars are a guiding light, yet implementation is diverse[6,7]. On the one hand, unilateral digital taxation may contribute to close revenue gaps and, on the other, to trade retaliation. It would be very difficult for people to do real-time monitoring and at the same time keep the situation very transparent, if it were not for technological developments such as blockchain and AI. These can enable transparent taxation while coexisting in harmony with the minimal compliance cost requirement.

**Figure 1:**

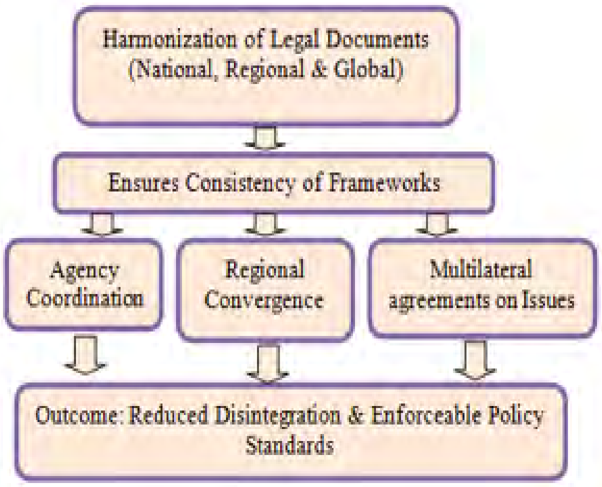



**Consumer-Protection Imperatives:** Consumers are the most disadvantaged in cross-border digital transactions. Among the threats are fraudulent platforms, misrepresentation, and algorithmic exploitation. A strong consumer-protection system is the best weapon to regain lost trust and at the same time it acts as an incentive[17,18]. Participants would be happy if for instance, they find an online method of conflict resolution, mechanisms of transparency, and standard contracts, all being in place. They would also feel secure since these activities are coordinated at an international level by the relevant authorities of the involved countries and, thus, enforcement and dispute resolution are efficient worldwide.

**Figure 2**


**Harmonisation and Policy Coherence:** By harmonising different legal documents, it is ensured that national, regional, and global frameworks are consistent with each other. Along with that, the coordination between the different agencies, the convergence on the different regions, and the agreement on the issues discussed in the multilateral fora are very important factors to be considered. Therefore, among others, these three examples - ASEAN Digital Economy Framework[13], African Union Digital Strategy[14], and EU Digital Single Market[15], - show how cooperation among respective partners can lessen disintegration. Even so, harmonization must continue to rely on policy constraints and standards that can be enforced.

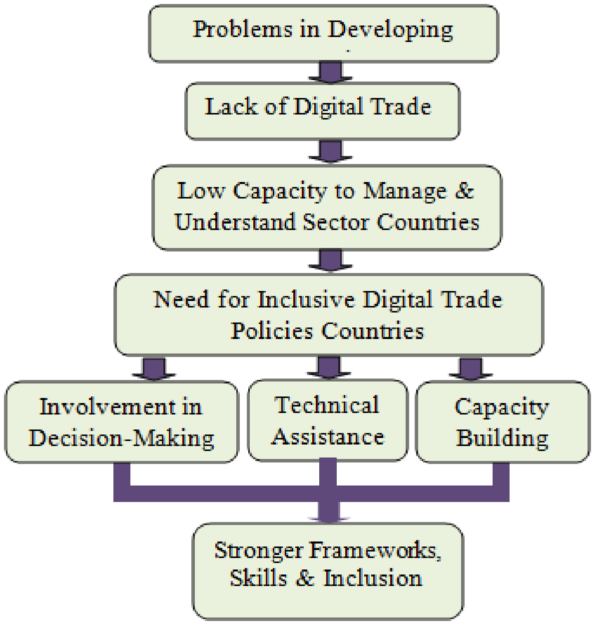
**Figure 3**




**Inclusivity and Development Perspectives:** Developing countries have to grapple with various problems arising from the lack of proper digital trade infrastructures and the insufficient capacity of the people to understand and manage the sector at the same time. The main constituents of inclusive policies are involvement in decision-making, technical help, and raising of the capacity level through training and workshops. One such program is UNCTAD eTrade for All, which opens up legal frameworks for all by linking them with infrastructure and skills development.

**Ethical and Socioeconomic Dimensions:** Essentially, the subject of ethics is beyond the scope of technical regulation. Tax avoidance, weak consumer protection, and data misuse are just a few of the ways that fairness is being undermined. The idea of ethical leadership encompasses these values, to name a few, as well as some of the ones above: transparency, accountability and corporate social responsibility. The inclusion of ethics will lead to improved public trust, sharing of economic benefits, and sustainable digital development.

**Figure 4**




## CONCLUSION

It is evident that digital trade is transforming economic activity around the world but regulatory frameworks are still organised to support physical trade. As it is seen in the analysis, taxation, consumer protection and regulatory harmonization are the core of the governance issues that arise in the digital age. The old tax regulations, along geographical lines, are not able to reflect the digital generation of value, as this leaves major gaps in revenues, particularly in emerging economies. Likewise, the incoherent consumer-protection regimes do not provide accountability across borders, putting the consumers at risk of fraud, misuse of data and uneven systems of redress.

Although the international measures, the BEPS reforms of OECD, the Joint Statement Initiative of WTO, the regional treaties, like CPTPP, RCEP, and the USMCA are imperative steps towards the achievement of coherence, they are still fragmented, voluntary, or partial. Asymmetries in digital capacity, institutional readiness and bargaining power still persist in developing countries, and this demonstrates the necessity of inclusive, capability-strengthening forms of governance. An evolutionary digital trade regime needs to incorporate, therefore, equitable taxation, enforceable consumer rights, interoperable regulatory systems and specificity in capacity building. Combined with these factors, digital trade may become an engine of justifiable development, accountability, and trust. To realise this vision, a global collaboration that is based on fairness, technological flexibility, and collective responsibility will be needed.

**Conflict of Interest:** None of the authors of this research work has any conflict of interest that may affect the publication of this research work.

**Data Availability:** All data are available with the corresponding author on reasonable request.

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P-ISSN: ______ E-ISSN: _________
Cross Ref DOI: http://dx.doLorg/10.21786
Publishers: Society for Science and Nature, Bhopal India
Periodicity: Jan-Feb-March, April-May-June,
July-Aug-Sep and Oct-Nov-Dec
Journal Website: https://mntrc.in/

**(Important Links of Journal)**

1. Cover letter with Reviewers and their addresses (see template): https://mntrc.in/wp-content/uploads/2024/07/Sample-Cover-letter-MNTRC.pdf
2. Manuscript On Line Submission: https://mntrc.in/homepage/submit-article-2/

**Instructions for Authors / Detailed MS Submission Guidelines For**
**SSN Journal of Management and Technology Research Communications**

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Only through the journals online submission system at https://mntrc.in/ (https://mntrc.in/homepage/submit-article-2/)

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Before final submission, please make sure that the manuscript conforms to the journal guidelines and instructions to authors for the preparation of the manuscript.

**MS not prepared as per instructions to authors will not be entertained and will be returned as incomplete submission.**

Please note that the journal does not charge any fees for submission of articles, and we do not give any fixed frame of time to publish an article, since the review of articles depends upon the reviewers processing time, the editorial assessment, and production. Roughly a MS takes about 60 to 90 days from the date of submission to publication, depending upon the review process and number of revisions envisaged.

**Academic Quality of Submitted Manuscripts**

Manuscript must be written in explicit English language, with the writing clear, concise, and logical, consisting of high academic quality and scientific rigor. Authors submitting manuscripts to SSN Journal of Management and Technology Research Communications should present an accurate account of the work performed as well as an objective discussion of its significance. Underlying data should be represented accurately in the paper. There should be a clear statement of logical objectives and rationale / justification to take up the study. Study design must be robust and all methods used must be cited properly with standard references so that they can be reproduced easily. A paper should contain sufficient detail and references to permit others to replicate the work.

Discussion must have a critical and comprehensive account of statements, supported by up-to-date references. Conclusions must be drawn in corroboration with data and interpretation highlighting the novelty of the work. References need to be checked for their presence in both text and reference section with all links of references from Google Scholar, Pub Med etc.

**If any of the above features are missing in the manuscript, it may not be processed for the initial internal reviews and selection of the MS**

1. **Ethical & Plagiarism Policies of SSN Journal of Management and Technology Research Communications** Ethical Issues Plagiarism

**On Ethical Issues:**
**Animal and Human Studies**

Ethical declarations in research form an integral part during the submission process of a manuscript to a journal. SSN Journal of Management and Technology Research Communications requires that the experimental conditions under which animal and human assays and tests are performed are as per standard protocols used worldwide.

Authors must make it clear in writing that the procedures they used were as humane as possible and have been compiled with the guidelines for animal care of their institutions or with national / international guidelines. Studies on animals must comply with the prevailing standards of animal welfare according to Indian Council of Medical Research Guidelines or Committee for the Purpose of Control & Supervision of Experiments on Animals ( CPCSEA ) in India, and likewise following similar conditions elsewhere, (Ethical Approval Committees/ Institutional Review Board with Approval Number is necessary). For details of animal studies please see : ARRIVE and Guide for the Care and Use of Laboratory Animals.

Studies involving human subjects / patients / and also if the manuscript includes case reports / case series, authors need to provide the following: Name of the Ethical Committees /Institutional review Board, they have obtained consent from along with approval number /ID. Authors should specifically mention that the study was in accordance with the Helsinki Declaration of 1975 (Human Research: Helsinki Declaration as revised in 2013, SCARE criteria etc).

**Case Reports:** Case Reports should be followed as per the guidelines of SCARE criteria.

Informed consent should be obtained from all patients for being included in the study." If any identifying information about participants is included in the article, the following sentence should also be included: "Additional informed consent was obtained from all individuals for whom identifying information is included in this article." If you have not included or cannot include this statement in your manuscript, please provide the reason or an alternative statement here and in the manuscript.

**Disclosure of Interest**

Authors must provide details of any financial or personal relationships that might bias the work being submitted. In a section of text preceding the References, please provide relevant information for each author(s) with regard to any conflicts of interest. All submissions must include disclosure of all relationships that could be viewed as presenting a potential conflict of Interest.

**Acknowledgement of sources:** Proper acknowledgement of the work of others must always be given.
Funding acknowledgement must be properly made with grant details, number etc.

**Data access and retention:** Authors may be asked to provide the raw data in connection with a paper for editorial review, and should be prepared to provide public access to such data.

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(Author Ethical Statement / Copyright form / Plagiarism Check Report)

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**The following files need to be submitted with every article:**

1. **Cover Letter stating the originality of research and why you think it should be published in SSN Journal of Management and Technology Research Communications with names / addresses and emails of 3 external reviewers must be attached,** (See Cover Letter template).

**Original Research Articles Manuscript MS Text: For preparation and style of MS:** (See Manuscript Template): Articles must be a minimum of 3,000 words to a maximum of 4,000 words excluding abstract and references. Please note that only the main text is included in the word count; the abstract, references, figure captions, and tables are not counted toward the word count. The full manuscript should contain first page with full author names, affiliation, ORCID No and the corresponding author email / ORCID details, followed by full text of the MS file in word format. **All data/tables/figures/Images (images must be submitted with the MS in high print-reproducible resolution)**.

2. **Article Types: Submission of the following article types is considered for publication in SSN Journal of Management and Technology Research Communications**

1. **Original research articles, (4000) words**
2. **Critical analytical reviews (4000-5000 words)**
3. **Case reports with discussion (2500 words)**
4. **Short Communications (1500 words)**
5. **Letters to the Editor / Editorials / Perspectives / Correspondence (up to 1000 words)**

**(I) Original Research Articles**

Manuscript must be written in explicit English language, with the writing clear, concise, and logical, consisting of high academic quality and scientific rigor. It must be typewritten using Times New Roman font size 12 only, double-spaced with one inch margin on all sides. All manuscripts must be accompanied by author declaration with ethical certificate signed by the corresponding author and all co -authors that they have seen and approved the final version of the manuscript and that the article has NOT been published or submitted to any other journal for publication. The corresponding author is responsible for obtaining permission from the copyright owner for the use of any copyrighted material in the submitted article.

Each original article must contain the following in the order as:

Title page: Title page should contain the following information:
Main Title of the article followed by short running title, Name (s) of author(s), Department (s)/Institution(s) City / Code & Country, where the work was performed, with all author ORCID links, (https://orcid.org/login). **E-mail address of the corresponding author marked with an asterisk * is necessary.**

**Abstract:** Abstract should be factual summarization of the entire work and should NOT TO EXCEED 250 words, with 5 keywords written below it.

Abstract must have following subheadings:

**Introduction (Objectives / Justification /Rationale), Brief Methods, Results and Conclusion**

**3. Main Text of the Manuscript: Text must be arranged under the following headings:**

- Introduction
- Material and Methods (Must have cited references so that they can be replicated easily)
- Results (Including Tables/Fig/ Clear Images)
- Discussion (Must be critical and comprehensive with up-to-date citations)
- Conclusion (must be based on data)
- Funding Statements /Acknowledgements (if any).
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**References should be numbered in superscript, serially in the order in which they appear, first through the text and then through table and figure legends. References should not include unpublished source materials. The list of References at the end of the text should be in the following format.**

**Lindley, S. T., Estimation of population growth and extinction parameters from noisy data. Ecol. Appl., 2003, 13, 806-813.**

**Martin, H., The Archaean grey gnesisses and the genesis of continental crust. In Archaean Crustal Evolution (ed. Condie, K. C.), Elsevier, Amsterdam, 1994, pp. 205-259.**

**Rao, K. N. and Vaidyanadhan, R., Geomorphic features in Krishna Delta and its evolution. In Proceedings of the National Symposium on Morphology and Evolution of Landforms, Department of Geology, Delhi University, New Delhi, 1978.**

**1. Introduction:** This section must provide a brief review of literature, purpose of the study, objectives and the rationale of the research undertaken should be given with proper clarity.

**2. Material and Methods:** This section of material and methods /procedures should be concise but detailed enough to enable the reader to reproduce the experiments / methodology. Commonly used procedures and methods in detail need not be described, but require a reference to the original source.

**Results (Including Tables/Fig/Images):** Give only brief findings, presented in the form of tables or figures, should be included without duplication of presentation and no discussion of the significance of the data, either tables or figures be given, avoid duplication of data.

**Discussion** should present the significance of the present data under the prevalent understanding and interpretation of the phenomenon. Speculative discussion is allowed but it should be concise and corroborated by the presented data.

**Conclusion** summarizes the study and is drawn from the results and discussion, should not be more than 100 words.

**Acknowledgements**/ Financial Acknowledgements if any, should be placed at the end of Conclusion before References.

**References:** (Strictly as per Vancouver Style)

**References** should be numbered in superscript, serially in the order in which they appear, first through the text and then through table and figure legends. References should not include unpublished source materials.

References in text of the manuscript should be written using numbers in super script.

The final bibliography in the **References Section** should be **arranged by Arabic numbers cited in text matter: All references must be written in 11 point font Roman letters.**

*Use Italic styles only for scientific names of organisms, genera, species in the entire MS as well as in the Reference section.*

*In this section et al should be used only after three names of authors.*

In reference section, DOIs / Links of the references from PubMed, WoS–Clarivate Analytics, Scopus, Google Scholar and others must also be provided.

All references should be checked minutely, for their appearance in text as well as in References, incomplete or missing references in the text or in Reference List & Vice versa will not be accepted, and the MS will be returned as **Incomplete Submission.**

**1. Example of Reference from a Standard Journal Article:**

The list of References at the end of the text should be in the following format.

Ali Sharique A, S Salim, Sahani T, Peter J and Ali Serotinergic receptors as novel target for optimizing skin pigmentary responses in Indian bull frog, Hoplobatrachus tigerinusBritish Journal of Pharmacology 2012 Vol 165 No 5 Pages 1515-1525.

**2. Example of Reference from a book:**
Falconer DC Introduction to Quantitative Genetics. 1960 Oliver & Boyd Edinburgh 165-185.

**3. Reference from article in a book:**
Ali, Sharique A, N Parveen and Ayesha S Ali In Herbal Medicine: Back to The Future, Promoting Melanocyte Regeneration Using Different Plants and Their Constituents – Vol 3
(Ed. Ferid Murad, Nobel Laureate) Bentham Science, USA 2021 Pages 247-276.

**Tables and Figures (or Images):** Short, Precise Tables and sharp image figures must be included, complete with legends /footnotes / explanation / units should be right below them. The tables and figures pages should be consecutively numbered, and arranged between results and discussion. Position of the tables or figures in the text of the MS must be indicated using same numbers.

**Instructions for Preparation of Images:** An image refers to the following: Graphs, photographs, maps, charts, paintings, drawings, diagrams, etc. Images must be embedded within the manuscript text between Results and Discussion of the article, not separately or at the end of the article. Once the article is accepted for publication, the author may be asked for submission of image in high resolution file formats. It is strongly recommended before embedding images in the manuscript, images must be prepared as mentioned below in the image specifications section.

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Systematic Reviews or Meta-Analysis should be systematic, critical assessments of most recently updated literature and data sources pertaining to basic biological or bio-medical science topics that include a statistical technique for quantitatively combining the results of multiple studies that measure the same outcome into a single pooled investigation. Data must be searched for and selected systematically for inclusion and critically evaluated, and the search and selection process for compiling the review must be mentioned. The text should NOT exceed 5000 words excluding abstract, references, tables and figures.

Each of the sections of the **Systematic Review** or **Meta Analysis** articles should include specific sub-sections as follows:

1. **Structured Abstract:** (Not exceed 250 words):Objectives, Methodology, Results and Conclusion
2. **Introduction:** Rationale, Objectives, Research questions
3. **Methodology:** Study design, Participants, interventions, comparators
4. **Systematic Review Protocol:** Search strategy, Data sources, Studies Sections and Data Extraction, Data analysis/ Statistical tools used
5. **Results and Discussion:** In results provide flow diagrams / attractive tables / figures of the studies retrieved for the review, study selection characteristics synthesized findings, risk of bias etc.
6. **Summary:** Abstract of main findings, Limitations, Conclusions etc.**For all other information including title page, typing and reference style etc, please follow the instructions to authors for Research Articles.**

**(III) Case Reports with Discussion**

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**Case Reports:** Case Reports should be followed as per the guidelines of SCARE criteria

Case Report /case description should start with a single paragraph abstract followed by text, which should not exceed 2000 words (excluding references, tables and figures) with maximum 10 bibliographic references and either three figures or three tables. Case report / case presentation must contain:

1. Brief Abstract (should not exceed 150 words)
2. Introduction
3. Case Presentation
4. Reviews & Discussion
5. Conclusion
6. References

Patient Consent, Competing interests, Funding Statement, Acknowledgements (if any). For all other information including title page, typing and reference style, please follow the instructions for original articles.

**(IV) Short Communications**
Short communication should be original work, such as complete results of a short pilot study, not merely a preliminary report and should not exceed 2000 words with one or two figures and/or one table. An editorial decision will be provided rapidly without reviews. For writing and references style, follow the same instructions listed above.

**(V) Letters to the Editor/Editorials / Perspectives / Correspondence**

Opinions on topics and articles recently published in the journal will be considered for publication if they are objective and constructive in nature and provide academic interest to the readers. These letters may also be forwarded to the author of the cited article for possible response. The editor reserves the right to shorten these letters, delete objectionable comments, make other changes, or take any other suitable decision to comply with the style and policies of the journal. For writing and references style, follow the same instructions listed above.

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# SSN Journal of Management and Technology Research Communications

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